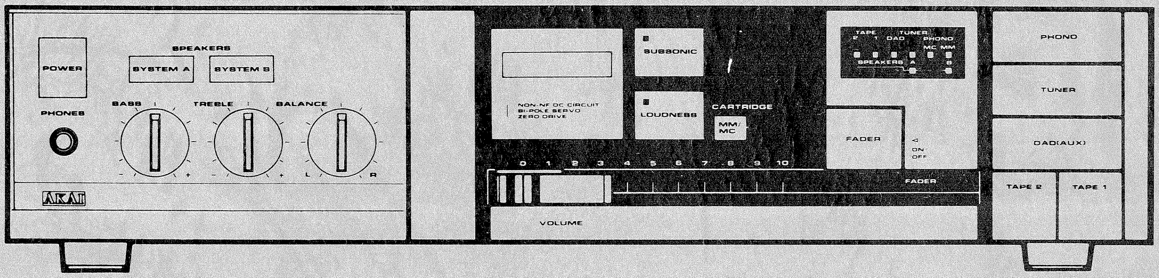
AKAI SERVICE MANUAL

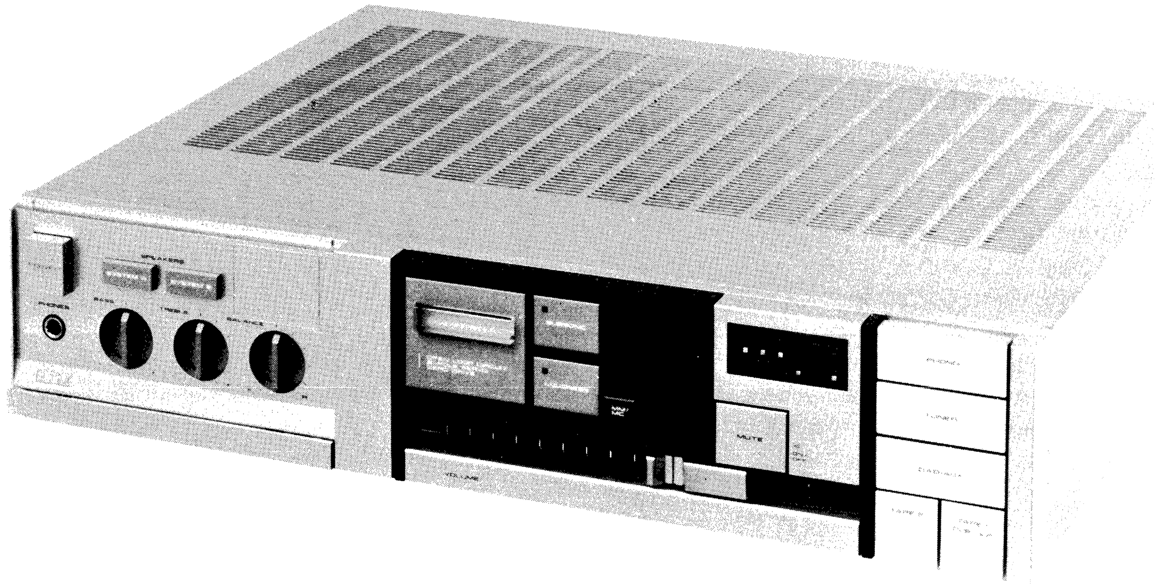

SPEAKERS
POWER
SYSTEM A
SYSTEM B
PHONES
BASS
TREBLE
BALANCE
L
R
SUBSONIC
LOUDNESS
NON-NF DC CIRCUIT
BI-POLE SERVO
ZERO DRIVE
CARTRIDGE
MM/MC
TAPE
2 1
TUNER
DAD
PHONO
MC MM
SPEAKERS A B
FADER
ON/OFF
0 1 2 3 4 5 6 7 8 9 10
FADER
VOLUME
PHONO
TUNER
DAD(AUX)
TAPE 2
TAPE 1

STEREO INTEGRATED AMPLIFIER

MODEL AM-U5

ABBREVIATIONS FOR SERVICE MANUAL
MODEL AM-U5

ABBREVIATION	EXPLANATION
AC	Alternating Current
RL	ReLay
DC	Direct Current
EQ	EQualizer
SW	SWitch
MM	Moving Magnet (Cartridge)
MC	Moving Coil (Cartridge)
GND	GrouND
INV	INVerter
DET	DETector



STEREO INTEGRATED AMPLIFIER

MODEL AM-U5

SECTION 1 SERVICE MANUAL 3
SECTION 2 PARTS LIST 17
SECTION 3 SCHEMATIC DIAGRAM 25

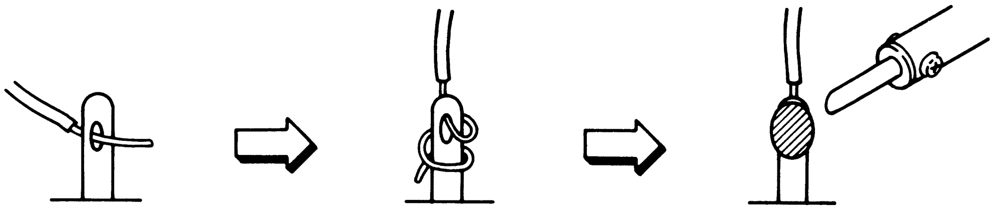
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

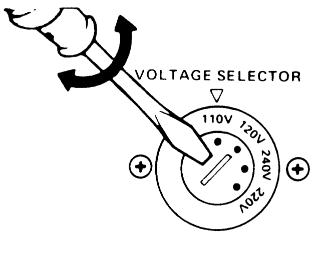
Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for $\boxed{C}$ or $\boxed{A}$, specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
10. Voltage Conversion
    Models for Canada, USA, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to its destination, but some machines can be set to 110V, 120V, 220V or 240V as required. If your machine's voltage can be converted:
    1) Disconnect the power cord from the power supply.
    2) Turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

I. SPECIFICATIONS **4**
II. DISMANTLING OF UNIT **5**
III. CONTROLS **6**
IV. PRINCIPAL PARTS LOCATION **7**
V. CIRCUIT OPERATION **8**
  5-1 ZERO DRIVE 8
  5-2 OVERCURRENT DETECTING CIRCUIT 8
VI. ADJUSTMENTS **9**
  6-1 IDLING CURRENT ADJUSTMENT 9
  6-2 EQ AMP DC BALANCE ADJUSTMENT 9
VII. CLASSIFICATION OF VARIOUS P.C BOARD **10**
  7-1 P.C BOARD TITLES AND IDENTIFICATION NUMBERS 10
  7-2 COMPOSITION OF VARIOUS P.C BOARDS 11

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

POWER AMPLIFIER SECTION

RATED POWER OUTPUT (2 channels Driven)	8 ohms	4 ohms
20 to 20,000 Hz	60W x 2/0.5%	60W x 2/0.5%
1 kHz	65W x 2/0.5%	73W x 2/0.7%
SIGNAL TO NOISE RATIO (IHF-A)		
PHONO	MM: 88 dB MC: 65 dB	
AUX	100 dB	
RESIDUAL NOISE (8 ohms)	0.2 mV	
CHANNEL SEPARATION (IHF, 1 kHz)	65 dB (PHONO)	
DAMPING FACTOR (1 kHz, 8 ohms)	30	
OUTPUT IMPEDANCE		
SPEAKERS	4 to 16 ohms (A or B) 8 to 16 ohms (A and B)	

PRE AMPLIFIER SECTION

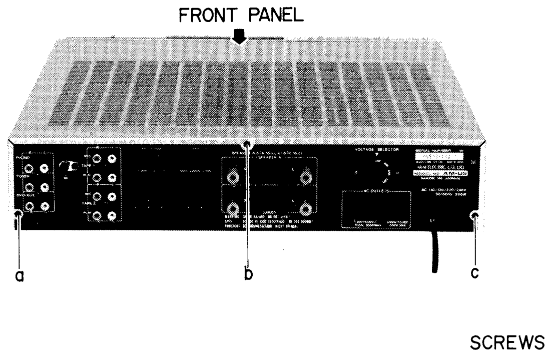
INPUT SENSITIVITY/IMPEDANCE	
PHONO	MM: 2.5 mV/47 kohms MC : 0.25 mV/100 ohms
AUX	150 mV/47 kohms
TUNER	150 mV/47 kohms
TAPE	150 mV/47 kohms
OUTPUT LEVEL/IMPEDANCE	
TAPE REC	150 mV/1 kohm
FREQUENCY RESPONSE	
PHONO (RIAA Deviation)	20 Hz to 20 kHz ±0.2 dB
TUNER/AUX/TAPE	5 Hz to 100 kHz −2 dB
TONE CONTROL	
BASS	±8 dB/100 Hz
TREBLE	±8 dB/10 kHz
LOUDNESS CONTROL (Volume set at −30 dB position)	+10 dB/100 Hz, +6 dB/10 kHz
SUBSONIC FILTER	−3 dB/oct at 18 Hz
PHONO MAX. INPUT LEVEL (1 kHz)	MM: 250 mV MC : 25 mV
POWER REQUIREMENT	120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/120V/220V/240V, 50/60 Hz switchable for other countries.
POWER CONSUMPTION	300W (U), 320W (A), 370VA (C), 250W (E), 500W (B,S)
DIMENSIONS	440(W) x 105(H) x 365(D) mm (17.3 x 4.1 x 14.4 inches)
WEIGHT	8.5 kg (18.7 lbs)

For improvement purposes, specifications and design are subject to change without notice.

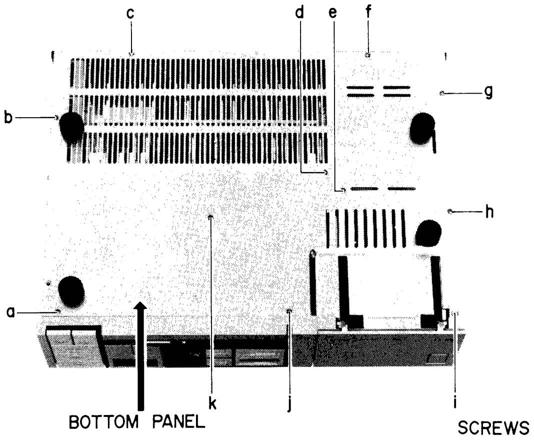
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

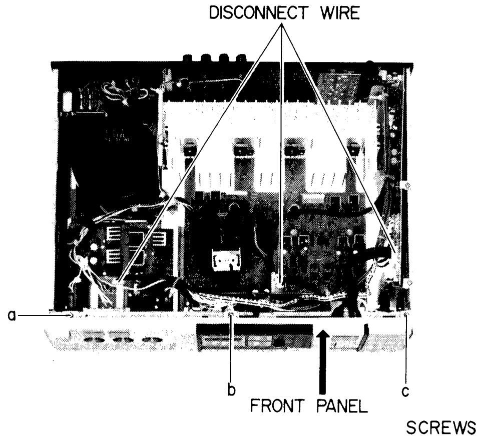
1


FRONT PANEL
a
b
c
SCREWS

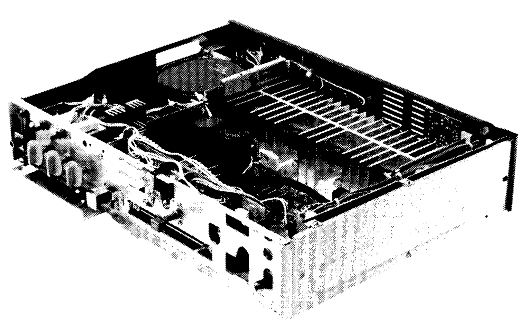
2


c
d
e
f
g
b
h
a
k
j
i
BOTTOM PANEL
SCREWS

3


DISCONNECT WIRE
a
b
c
FRONT PANEL
SCREWS

4



III. CONTROLS

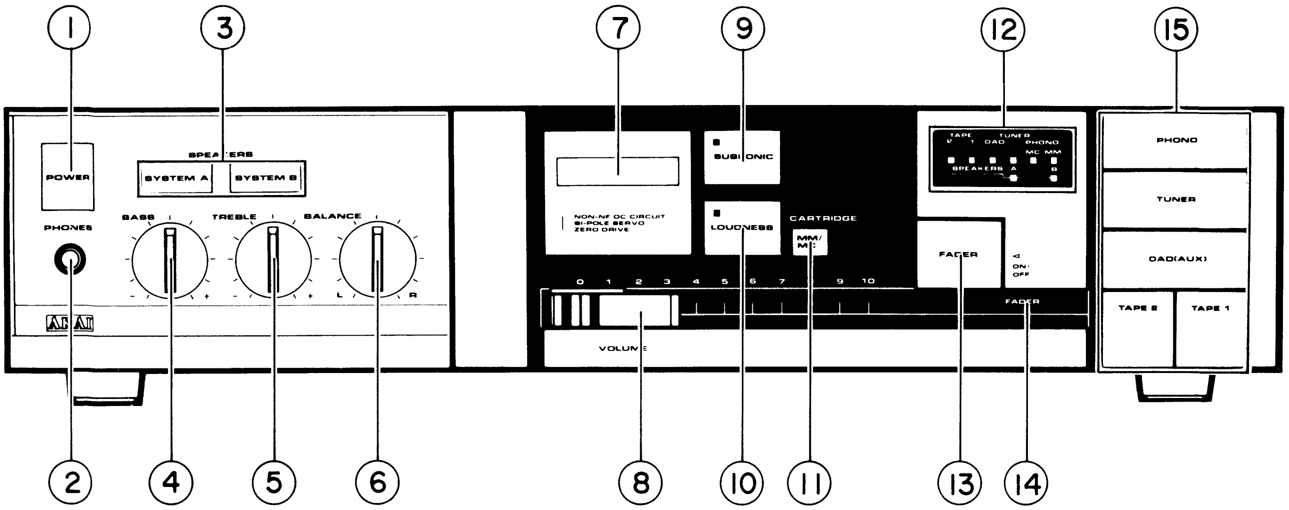

1
3
7
9
12
15
POWER
PHONES
SPEAKERS
SYSTEM A
SYSTEM B
BASS
TREBLE
BALANCE
L
R
AKAI
NON-NF DC CIRCUIT
BI-POLE SERVO
ZERO DRIVE
SUBSONIC
LOUDNESS
CARTRIDGE
MM/MC
0 1 2 3 4 5 6 7 9 10
VOLUME
TAPE
TUNER
DAD
PHONO
MC MM
SPEAKERS A B
FADER
ON/OFF
PHONO
TUNER
DAD(AUX)
TAPE 2
TAPE 1
2
4
5
6
8
10
11
13
14

Fig. 3-1 Front View

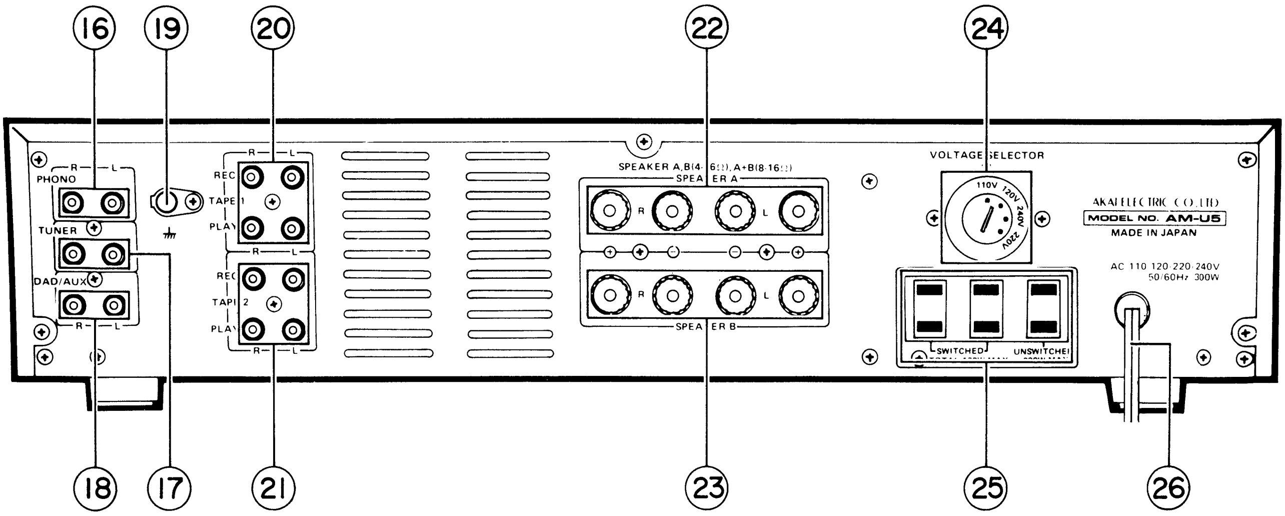

16
19
20
22
24
R
L
PHONO
TUNER
DAD/AUX
REC
TAPE 1
PLAY
TAPE 2
SPEAKER A,B(4-16Ω),A+B(8-16Ω)
SPEAKER A
SPEAKER B
VOLTAGE SELECTOR
110V
120V
240V
220V
AKAI ELECTRIC CO.,LTD.
MODEL NO. AM-U5
MADE IN JAPAN
AC 110 120 220 240V
50/60Hz 300W
SWITCHED
UNSWITCHED
18
17
21
23
25
26

Fig. 3-2 Rear View

1. POWER SWITCH
2. PHONES JACK
3. SPEAKER SELECTORS (A and B)
4. BASS CONTROL
5. TREBLE CONTROL
6. BALANCE CONTROL
7. LINE STRAIGHT SWITCH with INDICATOR
8. VOLUME CONTROL
9. SUBSONIC FILTER SWITCH with INDICATOR
10. LOUDNESS SWITCH with INDICATOR
11. CARTRIDGE SELECTOR (MM ■ /MC ▬)
12. INPUT, CARTRIDGE and SPEAKER INDICATORS
13. FADER BUTTON
14. FADER INDICATOR
15. INPUT SOURCE SELECTORS (PHONO, TUNER, DAD/AUX, TAPE 1 and 2)
16. PHONO JACKS
17. TUNER JACKS
18. DAD/AUX JACKS
19. GROUND TERMINAL
20. TAPE 1 REC/PLAY JACKS
21. TAPE 2 REC/PLAY JACKS
22. SPEAKER A TERMINALS (Left and Right)
23. SPEAKER B TERMINALS (Left and Right)
24. VOLTAGE SELECTOR ($\boxed{U}$ model only)
25. AC OUTLETS (not on some models)
26. AC POWER CORD

IV. PRINCIPAL PARTS LOCATION

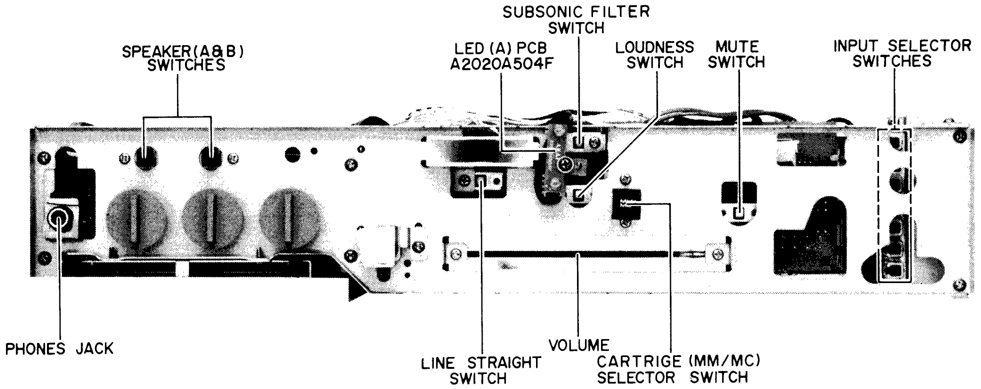

SPEAKER(A&B) SWITCHES
SUBSONIC FILTER SWITCH
LED (A) PCB A2020A504F
LOUDNESS SWITCH
MUTE SWITCH
INPUT SELECTOR SWITCHES
PHONES JACK
VOLUME
LINE STRAIGHT SWITCH
CARTRIGE (MM/MC) SELECTOR SWITCH

Fig. 4-1 Front View

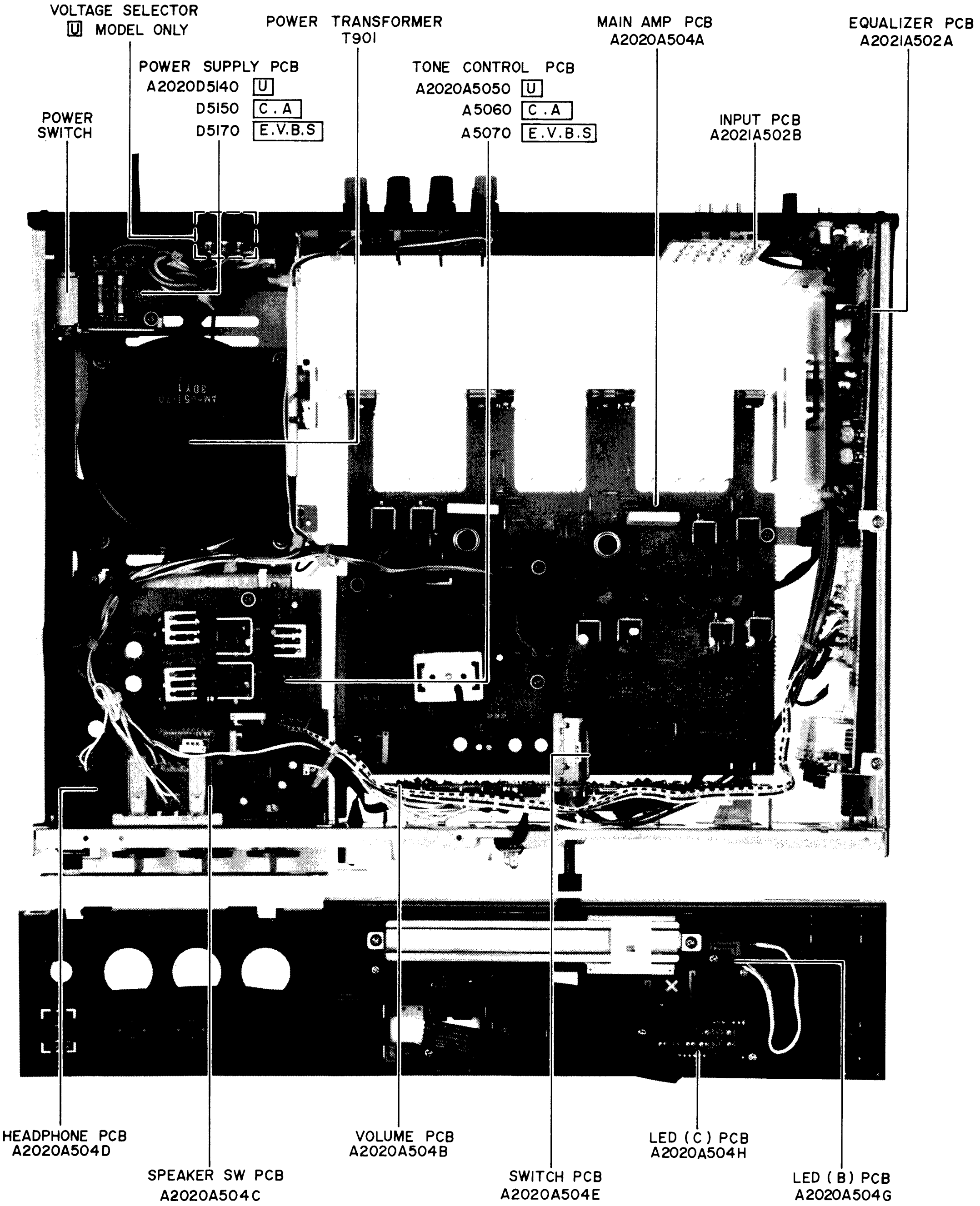

VOLTAGE SELECTOR
U MODEL ONLY
POWER TRANSFORMER T901
MAIN AMP PCB A2020A504A
EQUALIZER PCB A2021A502A
POWER SUPPLY PCB
A2020D5140 U
D5150 C.A
D5170 E.V.B.S
TONE CONTROL PCB
A2020A5050 U
A5060 C.A
A5070 E.V.B.S
POWER SWITCH
INPUT PCB A2021A502B
HEADPHONE PCB A2020A504D
VOLUME PCB A2020A504B
LED (C) PCB A2020A504H
SPEAKER SW PCB A2020A504C
SWITCH PCB A2020A504E
LED (B) PCB A2020A504G

Fig. 4-2 Top View

V. CIRCUIT OPERATION

5-1 ZERO DRIVE (Refer to Fig. 5-1 & 5-2)

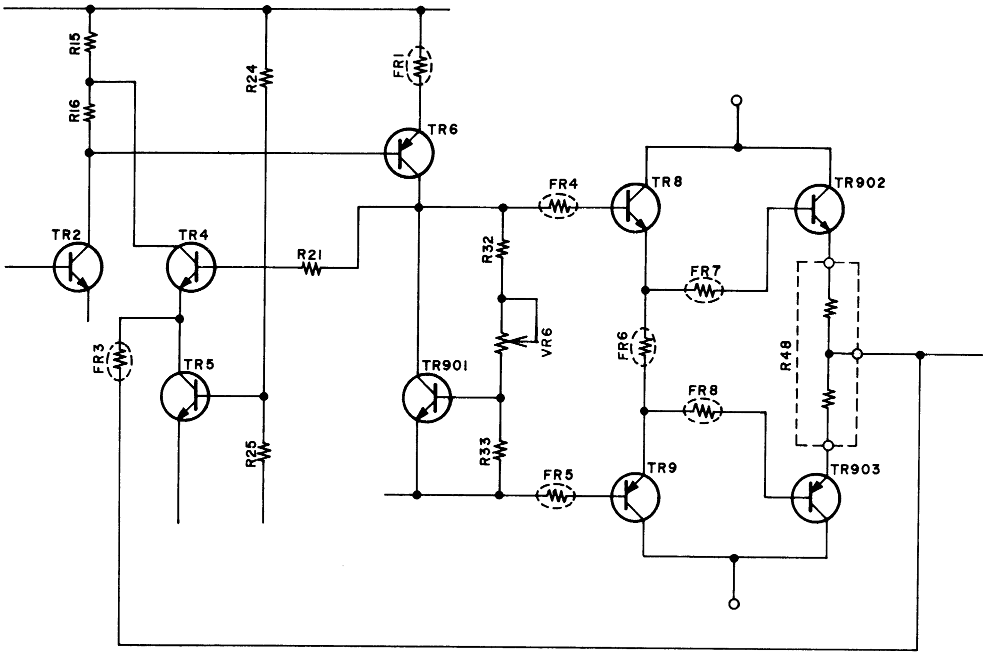

R15
R16
R24
FR1
TR6
TR2
TR4
R21
FR3
TR5
R25
TR901
R32
VR6
R33
FR4
FR5
TR8
FR7
FR6
FR8
TR9
TR902
R48
TR903

Fig. 5-1

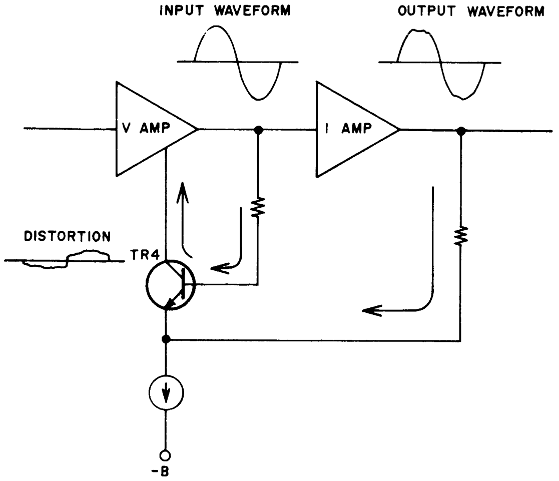

INPUT WAVEFORM
OUTPUT WAVEFORM
V AMP
I AMP
DISTORTION
TR4
-B

Fig. 5-2

This is intended to reduce distortions in the current amplifier stage. Voltage differences (distortion components) between the current amplifier stage (I Amp) input (TR8) and the main amp output (R48) when signals have been input, are detected with TR4, and signals will be applied to the voltage amplifier stage loads (R15 and R16) in a manner to cancel off the distortion components detected.

5-2 OVERCURRENT DETECTING CIRCUITT (Refer to Fig. 5-3)

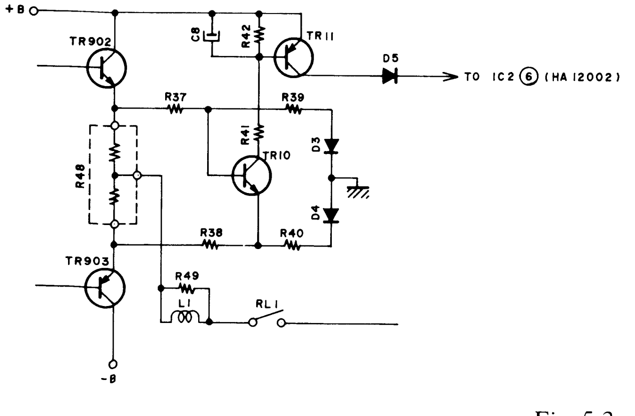

+B
TR902
C8
R42
TR11
D5
TO IC2 ⑥ (HA 12002)
R37
R39
R41
TR10
D3
R48
D4
R38
R40
TR903
R49
L1
RL1
-B

Fig. 5-3

Relay (RL1) is turned off for the protection of transistors against destruction and internal temperature rises, in the event that the load is shorted or the load impedance has dropped, causing an excessive current to flow. The voltage drop across R48 upon the flowing of an overcurrent turns TR10 on. Then, the TR11 base will be drawn to the ground potential, turning TR11 on. This draws the TR11 collector toward +B, and will activate the IC2 (HA12002) overcurrent detection, turning off relay (RL1). In this case, the relay (RL1) will not be reset until after the power switch has been pushed off at least once.

VI. ADJUSTMENT

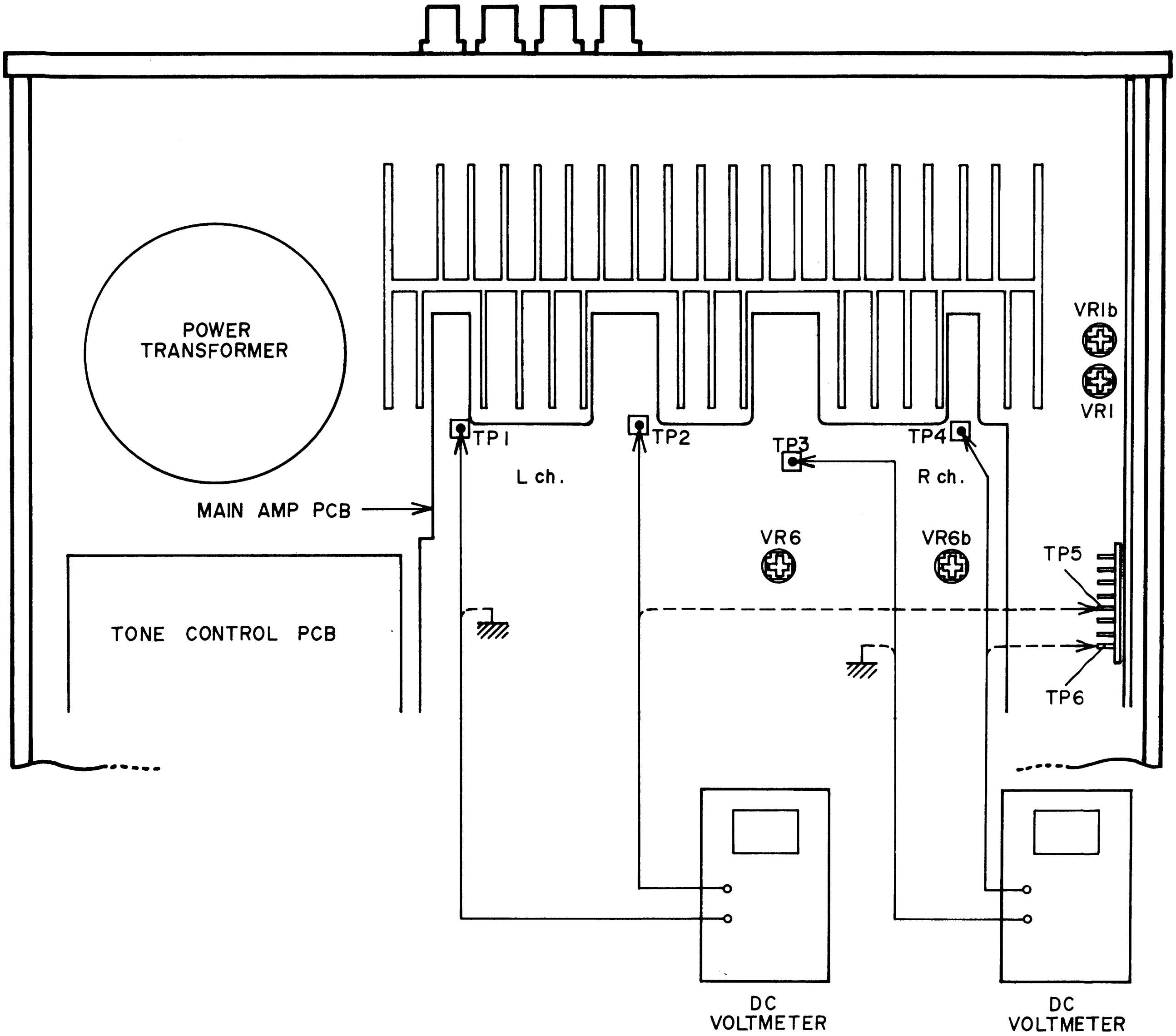

POWER TRANSFORMER
MAIN AMP PCB
TONE CONTROL PCB
TP1
TP2
TP3
TP4
L ch.
R ch.
VR6
VR6b
VR1b
VR1
TP5
TP6
DC VOLTMETER
DC VOLTMETER

Fig. 6-1

6-1 IDLING CURRENT ADJUSTMENT

After power switch is "ON", connect the DC Voltmeter to the Test points as shown Fig. 6-1.
Adjust VR6 (left channel), VR6b (right channel) so that the DC Voltmeter Reading is 8 mV ± 2 mV.

6-2 EQ AMP DC BALANCE ADJUSTMENT

Function switch to PHONO (MC Range), Connect DC Voltmeter between TP5 (left channel), or TP6 (right channel) and GND.
Adjust VR1 (left channel), VR1b (right channel) so that the DC Voltmeter Reading is DC 0V ± 1 mV.

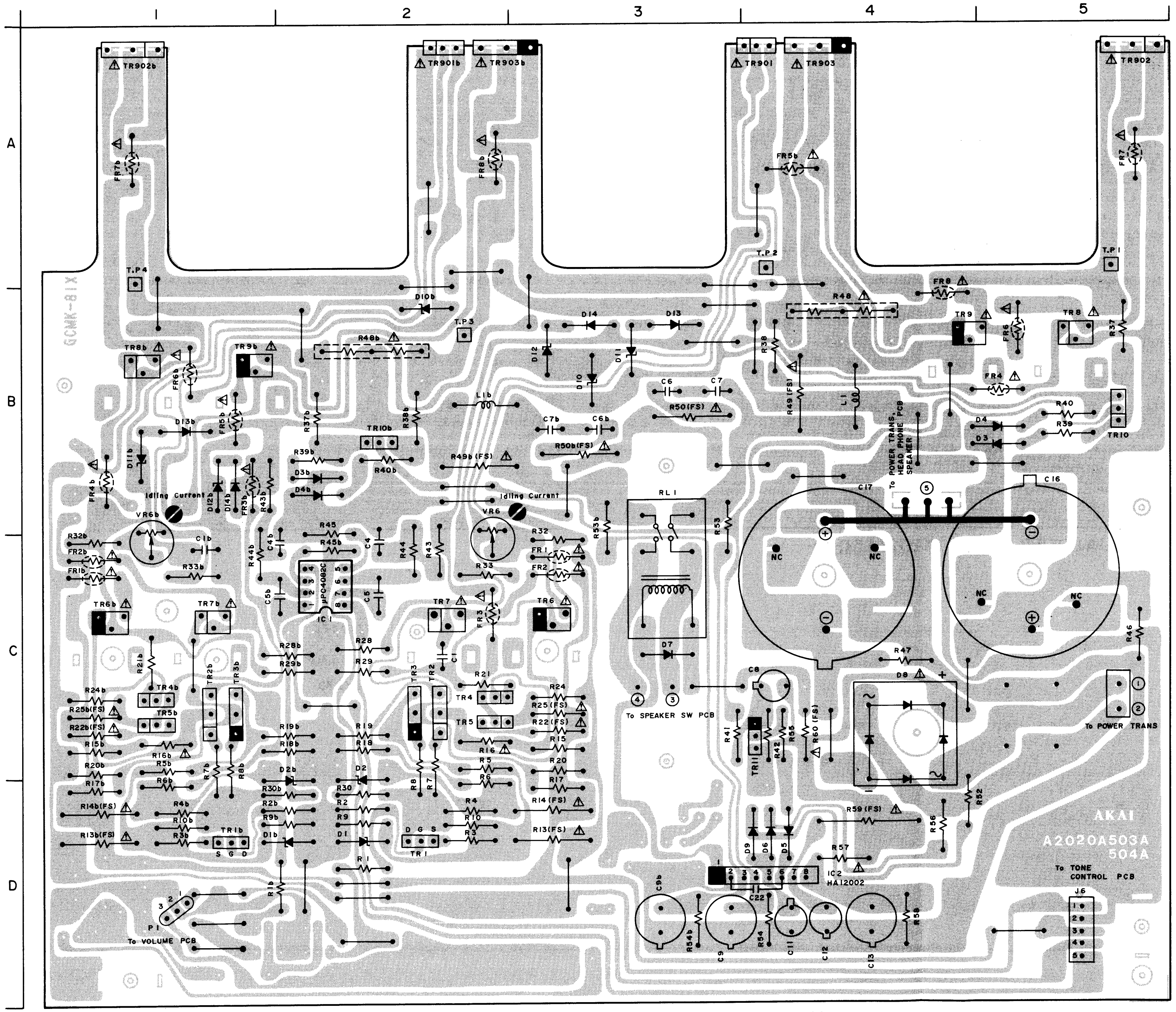
VII. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBER

Title	P.C Board Number	Remarks
MAIN AMP P.C BOARD	A2020A504A	
VOLUME P.C BOARD	A2020A504B	
SPEAKER SW P.C BOARD	A2020A504C	
HEAD PHONE P.C BOARD	A2020A504D	
SWITCH P.C BOARD	A2020A504E	
LED (A) P.C BOARD	A2020A504F	
LED (B) P.C BOARD	A2020A504G	
LED (C) P.C BOARD	A2020A504H	
TONE CONTROL P.C BOARD	A2020A5050	U
TONE CONTROL P.C BOARD	A2020A5060	C, A
TONE CONTROL P.C BOARD	A2020A5070	E, V, B, S
EQUALIZER P.C BOARD	A2021A502A	
INPUT P.C BOARD	A2021A502B	
POWER SUPPLY P.C BOARD	A2020D5140	U
POWER SUPPLY P.C BOARD	A2020D5150	C, A
POWER SUPPLY P.C BOARD	A2020D5170	E, V, B, S
TERMINAL P.C BOARD	A2018D5070	V model only

2. COMPOSITION OF VARIOUS P.C BOARDS

1) MAIN AMP P.C BOARD A2020A504A, VOLUME P.C BOARD A2020A504B

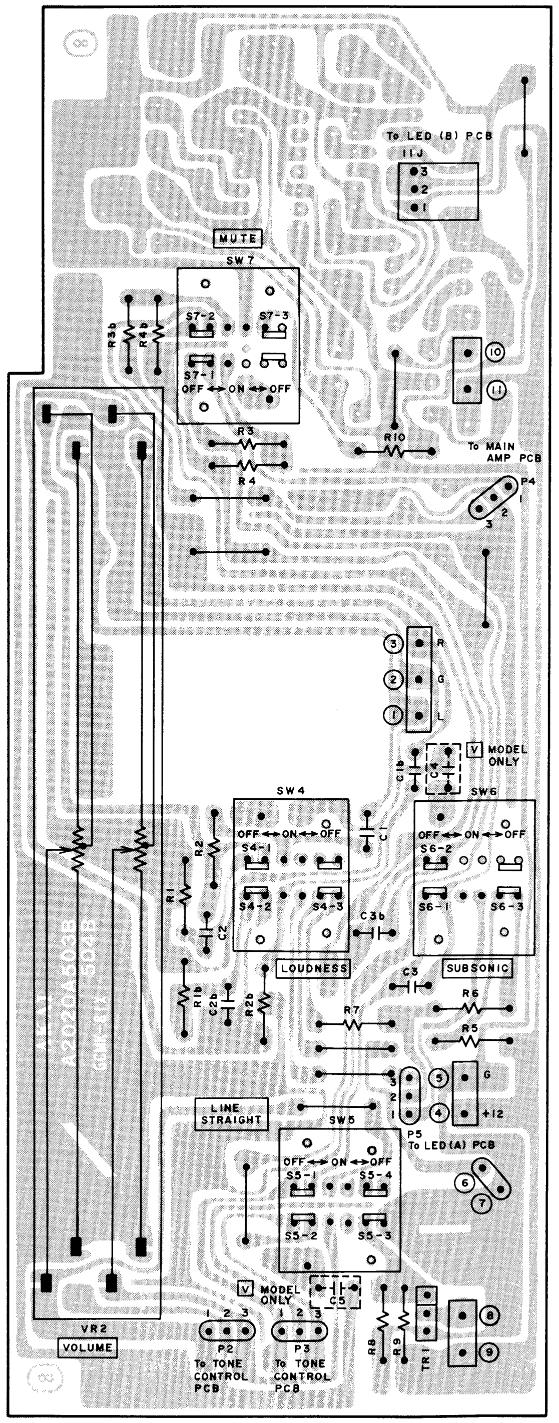

1
2
3
4
5
A
B
C
D
⚠TR902b
⚠TR901b
⚠TR903b
⚠TR901
⚠TR903
⚠TR902
T.P4
T.P3
T.P2
T.P1
TR8b
TR9b
TR10b
TR10
TR9
TR8
TR6b
TR7b
TR7
TR6
TR4b
TR5b
TR4
TR5
TR1b
TR1
TR11
RL1
IC1
μPC4082C
IC2
HA12002
C16
C17
Idling Current
VR6b
VR6
To POWER TRANS. HEAD PHONE PCB SPEAKER
To SPEAKER SW PCB
To POWER TRANS
To TONE CONTROL PCB
To VOLUME PCB
J6
P1
AKAI
A2020A503A
504A

MAIN AMP PCB A2020A504A

LOCATION OF COMPONENTS	
TR	
TR1	D2
TR1b	D1
TR2 to 5	C2
TR2b to 7b	C1
TR6	C3
TR7	C2
TR8	B5
TR8b	B1
TR9	B4
TR9b	B1
TR10	B5
TR10b	B2
TR11	C4
TR901	A4
TR901b	A2
TR902	A5
TR902b	A1
TR903	A4
TR903b	A2
IC	
IC1	C2
IC2	D4
CONNECTOR	
①, ②	C5
③, ④	C3
⑤	B4
P1	D1
J6	D5

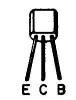
●●● = NPN TRANSISTOR

■●● = PNP TRANSISTOR

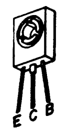

To LED (B) PCB
MUTE
SW7
S7-1
S7-2
S7-3
OFF ↔ ON ↔ OFF
To MAIN AMP PCB
P4
R
G
L
V MODEL ONLY
SW4
S4-1
S4-2
S4-3
SW6
S6-1
S6-2
S6-3
LOUDNESS
SUBSONIC
LINE STRAIGHT
SW5
S5-1
S5-2
S5-3
S5-4
P5
To LED (A) PCB
+12
VR2
VOLUME
P2
To TONE CONTROL PCB
P3
To TONE CONTROL PCB
A2020A503B
504B

VOLUME PCB A2020A504B

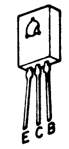
TR1, 1b	2SK117Y
TR2, 2b	2SC2690
TR3, 3b	2SA1220
TR4, 4b, 5, 5b, 10, 10b	2SC2909
TR6, 6b	2SA1209
TR7, 7b	2SC2911
TR8, 8b	2SC3116
TR9, 9b	2SA1248
TR11	2SA1207
TR901, 901b	2SC3116
TR902, 902b	2SC2580
TR903, 903b	2SA1105



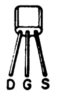
2SA1207
2SC2909



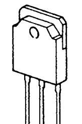
2SA1220
2SC2690



2SA1209
2SA1248
2SC2911
2SC3116



2SK117Y

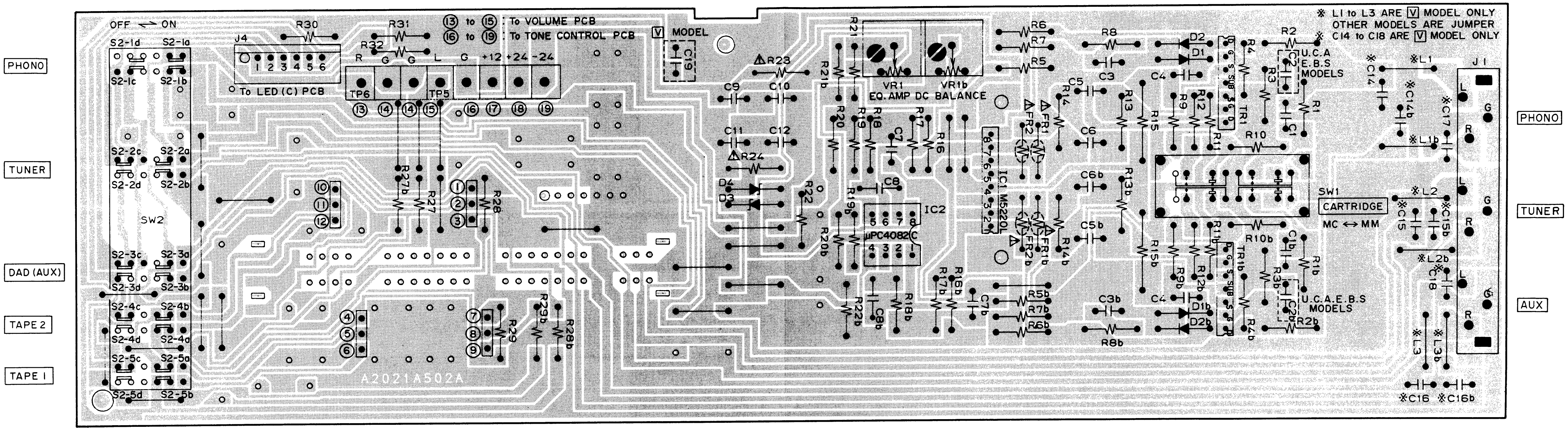


2SA1105
2SC2580

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

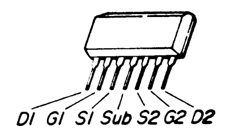
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

2) EQUALIZER P.C BOARD A2021A502A


PHONO
TUNER
DAD (AUX)
TAPE 2
TAPE 1
PHONO
TUNER
AUX
OFF ⇄ ON
S2-1d S2-1a
S2-1c S2-1b
S2-2c S2-2a
S2-2d S2-2b
SW2
S2-3c S2-3a
S2-3d S2-3b
S2-4c S2-4b
S2-4d S2-4a
S2-5c S2-5a
S2-5d S2-5b
J4
1 2 3 4 5 6
To LED (C) PCB
R30
R31
R32
⑬ to ⑮ : To VOLUME PCB
⑯ to ⑲ : To TONE CONTROL PCB
R G G L G +12 +24 -24
TP6 TP5
⑬ ⑭ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲
V MODEL
C19
R23
R24
C9 C10
C11 C12
D4
D3
R22
R21 R21b
R20 R20b
R19 R19b
R18 R18b
R22b
R17 R17b
R16 R16b
C7 C7b
C8 C8b
IC2
μPC4082C
IC1 M5220L
VR1 VR1b
EQ.AMP DC BALANCE
FR1 FR2 FR1b FR2b
R14 R14b
R6 R7 R5
R5b R7b R6b
C5 C6 C6b C5b C3 C3b
R8 R8b
R13 R13b
R15 R15b
R9 R9b
R12 R12b
R11 R11b
R10 R10b
R4 R4b
R3 R3b
R2 R2b
R1 R1b
C1 C1b C2 C2b
D1 D2 D1b D2b
C4
TR1 TR1b
D G S SUB S G D
U.C.A E.B.S MODELS
U.C.A.E.B.S MODELS
SW1
CARTRIDGE
MC ↔ MM
※ L1 to L3 ARE V MODEL ONLY
OTHER MODELS ARE JUMPER
※ C14 to C18 ARE V MODEL ONLY
※C14 ※C14b
※L1 ※L1b
※C17
※L2 ※L2b
※C15 ※C15b
※C18
※L3 ※L3b
※C16 ※C16b
J1
L G R
① ② ③
④ ⑤ ⑥
⑦ ⑧ ⑨
⑩ ⑪ ⑫
R27 R27b
R28 R28b
R29 R29b
A2021A502A

EQUALIZER PCB A2021A502A

TR1. 1b 2SK270 (BL.V)

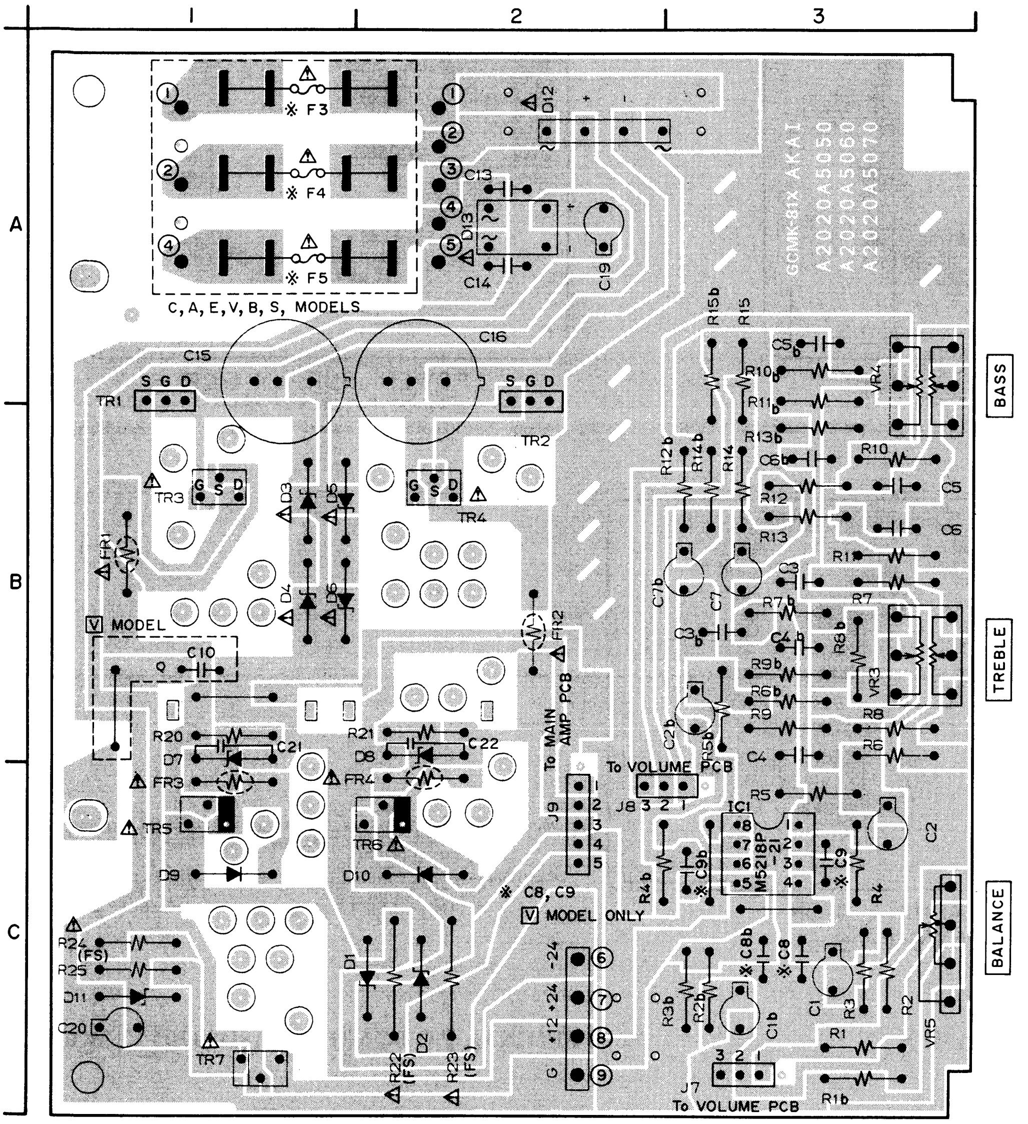

D1 G1 S1 Sub S2 G2 D2

2SK270

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

3) TONE CONTROL P.C BOARD A2020A5050 U , A2020A5060 C, A , A2020A5070 E, V, B, S

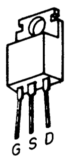

1
2
3
A
B
C
F3
F4
F5
C, A, E, V, B, S, MODELS
D12
D13
C13
C14
C19
C15
C16
TR1
TR2
TR3
TR4
TR5
TR6
TR7
S G D
G S D
D3
D4
D5
D6
FR1
FR2
FR3
FR4
V MODEL
C10
R20
R21
D7
D8
C21
C22
D9
D10
D11
R24 (FS)
R25
C20
D1
D2
R22 (FS)
R23 (FS)
To MAIN AMP PCB
To VOLUME PCB
J7
J8
J9
※ C8, C9
V MODEL ONLY
-24
+24
+12
G
GCMK-81X AKAI
A2020A5050
A2020A5060
A2020A5070
R15b
R15
R10b
R11b
R13b
R12b
R14b
R14
R10
R12
R13
R11
C5b
C5
C6b
C6
C7b
C7
C3
C3b
C4b
R7b
R7
R8b
R9b
R6b
R9
R8
R6
C4
R5
R5b
C2b
C2
IC1
M5218P
C9b
C9
R4b
R4
C8b
C8
R3b
R2b
R3
R2
C1b
C1
R1
R1b
VR3
VR4
VR5
BASS
TREBLE
BALANCE

TONE CONTROL PCB
A2020A5050 U
A2020A5060 C.A
A2020A5070 E.V.B.S

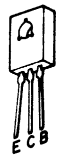
TR1, 2	2SK246
TR3	2SK213
TR4	2SJ76
TR5	2SC3116
TR6	2SA1248
TR7	2SD612K

LOCATION OF CONPONENTS

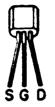
TR	
TR1	A1
TR2	A2
TR3	B1
TR4	B2
TR5	C1
TR6	C2
TR7	C1
IC	
IC1	C3
CONNECTOR	
① to ⑤	A2
(①,②,④)	A1
⑥ to ⑨	C2
J7	C3
J8	C3
J9	C2



2SK213
2SJ76



2SC3116
2SA1248
2SD612K



2SK246

☐○○ = NPN TRANSISTOR
B

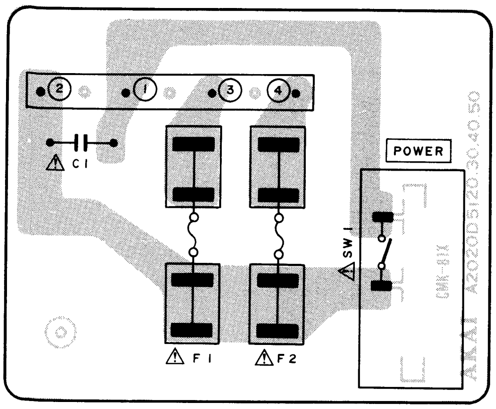
■○○ = PNP TRANSISTOR
B

※	F3	F4	F5
C, A	1A 125V	1A 125V	1A 125V
E, V, B, S	T1A	T1A	T1A

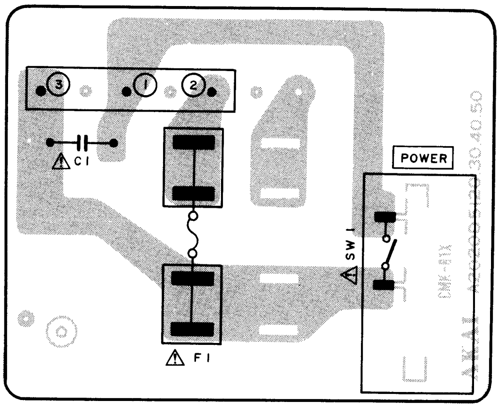
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

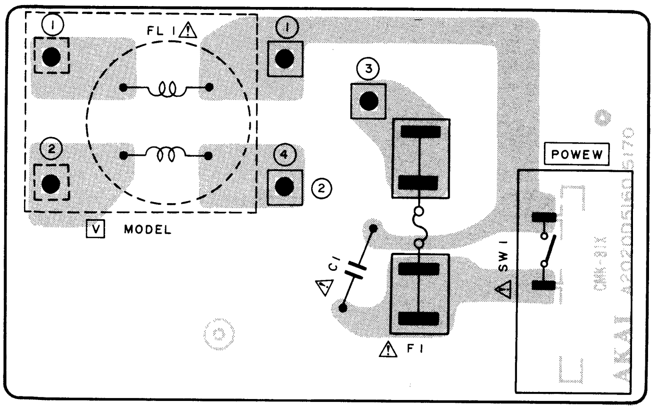
4) POWER SUPPLY P.C BOARD A2020D5140 U, A2020D5150 C, A, A2020D5170 E, V, B, S


② ① ③ ④
⚠C1
POWER
⚠SW1
⚠F1
⚠F2
CMK-81X
AKAI A2020D5120.30.40.50

POWER SUPPLY PCB
A2020D5140 U


③ ① ②
⚠C1
POWER
⚠SW1
⚠F1
CMK-81X
AKAI A2020D5120.30.40.50

POWER SUPPLY PCB
A2020D5150 C.A

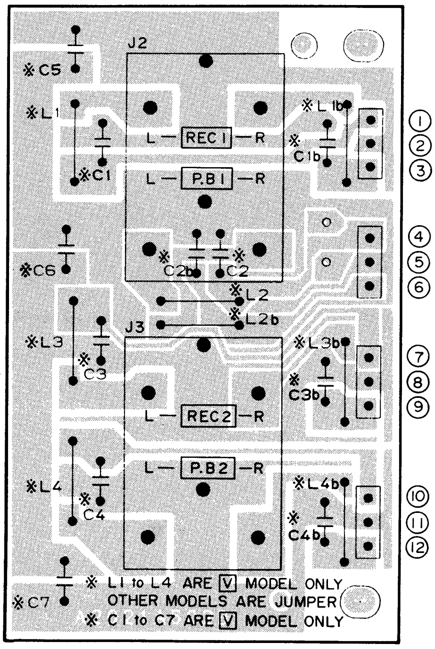

①
FL1⚠
①
③
②
④ ②
POWEW
V MODEL
⚠C1
⚠SW1
⚠F1
CMK-81X
AKAI A2020D5170

POWER SUPPLY PCB
A2020D5170 E.V.B.S

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

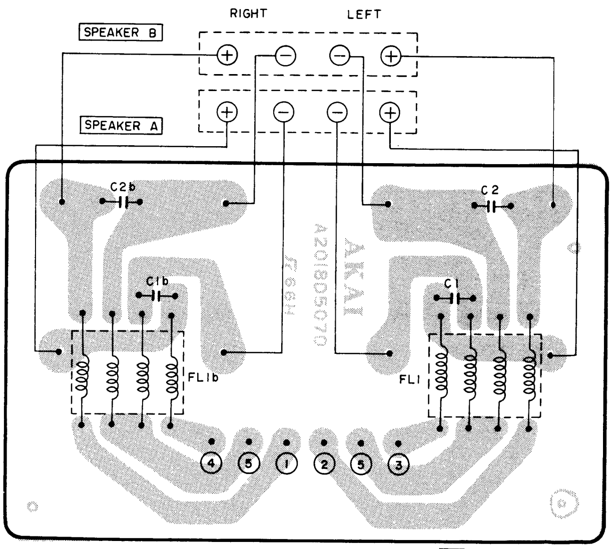
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

5) INPUT P.C BOARD A2021A502B


J2
※C5
※L1
※C1
L — REC1 — R
L — P.B1 — R
※L1b
※C1b
① ② ③
④ ⑤ ⑥
※C6
※C2b
※C2
※L2
※L2b
J3
※L3
※C3
※L3b
※C3b
⑦ ⑧ ⑨
L — REC2 — R
L — P.B2 — R
※L4
※C4
※L4b
※C4b
⑩ ⑪ ⑫
※C7
※ L1 to L4 ARE V MODEL ONLY
OTHER MODELS ARE JUMPER
※ C1 to C7 ARE V MODEL ONLY

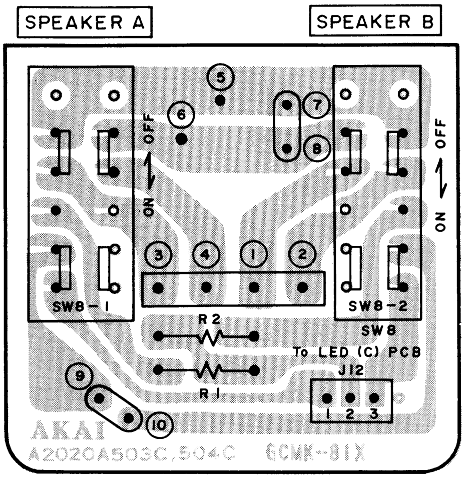
INPUT PCB
A2021A502B

6) TERMINAL P.C BOARD A2018D5070 V MODEL

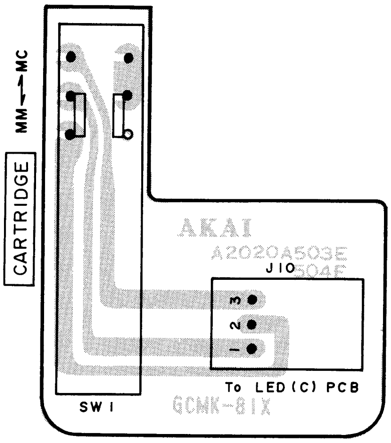

RIGHT
LEFT
SPEAKER B
SPEAKER A
C2b
C2
C1b
C1
FL1b
FL1
④ ⑤ ① ② ⑤ ③
AKAI A2018D5070

TERMINAL PCB A2018D5070 V MODEL

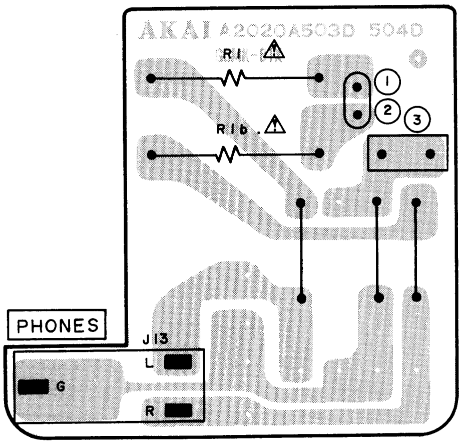
7) OTHER P.C BOARDS


SPEAKER A
SPEAKER B
OFF
ON
SW8-1
SW8-2
SW8
R2
R1
To LED (C) PCB
J12
1 2 3
AKAI
A2020A503C, 504C
GCMK-81X

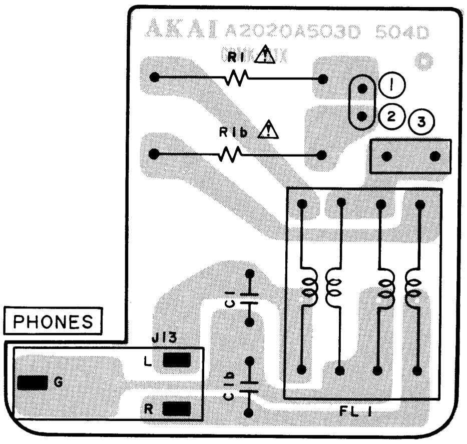
SPEAKER SW PCB
A2020A504C


MM → MC
CARTRIDGE
AKAI
A2020A503E
504E
J10
3
2
1
To LED (C) PCB
SW1
GCMK-81X

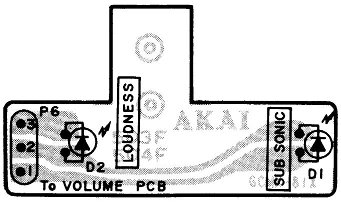
SWITCH PCB
A2020A504E


AKAI A2020A503D 504D
R1 ⚠
R1b ⚠
PHONES
J13
L
G
R

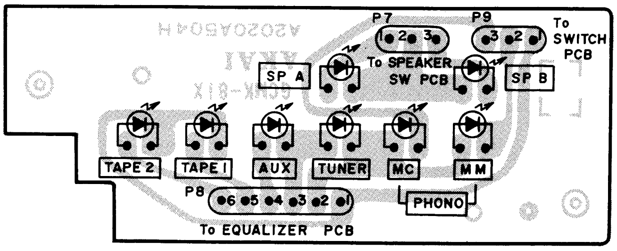
HEAD PHONE PCB
A2020A504D


AKAI A2020A503D 504D
R1 ⚠
R1b ⚠
C1
C1b
FL1
PHONES
J13
L
G
R

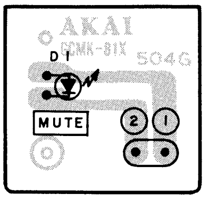
HEAD PHONE PCB
A2020A504D Ⓥ MODEL


P6
3
2
1
D2
LOUDNESS
AKAI
SUB SONIC
D1
To VOLUME PCB

LED (A) PCB
A2020A504F


A2020A504H
P7
P9
To SWITCH PCB
SP A
To SPEAKER SW PCB
SP B
TAPE 2
TAPE 1
AUX
TUNER
MC
MM
PHONO
P8
6 5 4 3 2 1
To EQUALIZER PCB

LED (C) PCB
A2020A504H


AKAI
GCMK-81X
504G
D1
MUTE
2
1

LED (B) PCB
A2020A504G

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

MEMO

SECTION 3

PARTS LIST

TABLE OF CONTENTS

RECOMMENDED SPARE PARTS 19
1. MAIN AMP U5 P.C BOARD BLOCK 20
2. TONE CONTROL P.C BOARD BLOCK 20
3. EQUALIZER P.C BOARD BLOCK 21
4. POWER SUPPLY U5-1 P.C BOARD BLOCK (U, C, A) 21
5. POWER SUPPLY U5-2 P.C BOARD BLOCK (E, V, B, S) 21
6. TERMINAL P.C BOARD BLOCK (V ONLY) 21
7. ASSEMBLY BLOCK 22
8. FINAL ASSEMBLY BLOCK 23
INDEX 24

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list
   a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

   b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

NO.	PARTS NO.	DESCRIPTION
1	BT-345621	⚠ TRANS POWER AM-U5T-30 (C,A)
2	BT-345622	⚠ TRANS POWER AM-U5T-40 (E,V)
3	BT-345623	⚠ TRANS POWER AM-U5T-50 (B,S)
4	BT-345620	⚠ TRANS POWER AM-U5T-70 (U)
5	ED-345555	⚠ D SILICON DBB10C 200/1.0A
6	ED-348786	⚠ D SILICON RB154 400/1.5A
7	ED-348836	⚠ D SILICON RB602U 200/6.0A
8	ED-348860	D LED GL4NG2 GRN
9	ED-348861	D LED GL4PR2 RED
10	ED-337391	D LED GL5NG6 GRN
11	ED-337153	D SILICON H DS446FA5 F10
12	ED-301911	D SILICON H DS448
13	ED-346564	D ZENER H HZ15L 1
14	ED-330219	D ZENER H HZ20L 2
15	ED-346575	D ZENER H HZ22L 3
16	ED-346576	D ZENER H HZ24L 1
17	ED-345615	D ZENER H 05Z12 Y
18	ED-324194	D ZENER H 05Z5.1 X
19	ED-323535	D ZENER H 05Z8.2 X
20	EF-623103	⚠ FUSE SEMKO T 250V 1.00A
21	EF-691007	⚠ FUSE SEMKO T 250V 3.15A (U,E,V,B,S)
22	EF-310229	⚠ FUSE TSC 125V 1.00A
23	EF-346115	⚠ FUSE TSC 125V 6.30A (C,A)
24	EI-345474	⚠ IC HA12002
25	EI-344764	IC M5218P-21
26	EI-348785	IC M5220L
27	EI-337360	IC μPC4082C
28	EI-348865	IC μPC4082C
29	EJ-337404	PIN J AJC-052-ABB P 6P
30	EL-348854	PL CODE 12.0V 220MA 250/250(IN902)
31	EL-348852	PL CODE 14.0V 100MA 100/100(IN901)
32	EQ-348789	RELAY POW JC2AD 48V
33	ER-319455	⚠ R FUSE ERD3FS S10 1/4W 10R0G
34	ER-345751	⚠ R FUSE ERD2FC S10 1/4W 15R0G
35	ER-338000	⚠ R FUSE ERD2FC S10 1/4W 2200G
36	ER-345618	⚠ R FUSE ERD2FC S10 1/4W 2700G
37	ER-345619	⚠ R FUSE ERD2FC S10 1/4W 3301G
38	ER-318248	⚠ R FUSE ERD2FC S10 1/4W 47R0G
39	ER-337756	⚠ R FUSE ERD2FC S10 1/4W 4700G
40	ES-348862	⚠ SW PUSH ESB-70405T 01-1 UC(C,A)
41	ES-343688	⚠ SW PUSH ESB-90279S 01-1EBV (U,E,V,B,S)
42	ES-343364	⚠ SW SELECTOR 0240#01 01-4 (U)
43	ES-345652	SW PUSH ESB-62907 5-THROW
44	ES-345481	SW PUSH SEA12 04-2N
45	ES-348841	SW PUSH SEA12 04-2S
46	ES-348845	SW PUSH SUL221S 2-THROW
47	ES-348847	SW REMOTE O SUR512 02-2
48	ES-337388	SW REMOTE S SSR24352 04-3
49	ET-348788	⚠ TR FET 2SJ76
50	ET-348787	⚠ TR FET 2SK213
51	ET-345629	⚠ TR 2SA1105 O,Y
52	ET-348829	⚠ TR 2SA1209 S,T
53	ET-345626	⚠ TR 2SA1248 S,T
54	ET-345628	⚠ TR 2SC2580 O,Y
55	ET-348831	⚠ TR 2SC2911 S,T
56	ET-345625	⚠ TR 2SC3116 S,T
57	ET-310148	⚠ TR 2SD612K E,F
58	ET-322353	TR FET 2SK117 Y
59	ET-337759	TR FET 2SK246 GR
60	ET-345614	TR FET 2SK270 BL,V
61	ET-348832	TR 2SA1207 S,T
62	ET-348834	TR 2SA1220 Q,P
63	ET-348835	TR 2SC2690 Q,P
64	ET-348830	TR 2SC2909 S,T
65	ET-348844	TR 2SD467C C
66	EV-361800	R S-FIX H SR19R 3P 0.15W 471
67	EV-338118	R S-FIX V H1052A 3P 0.15W 104
68	EV-337308	VR SLIDE 100P2SV0B B254

1. MAIN AMP U5 P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1U	BA-A2021A050A	PC MAIN U5 BLK AM-U5 (U) (EXCEPT V)
1-1V	BA-A2021A050B	PC MAIN U5 BLK AM-U5 (V)
	MAIN AMP U5 P.C BOARD	
1-IC1A	EI-337360	IC µPC4082C
1-IC2A	EI-345474	⚠ IC HA12002
1-TR1A	ET-322353	TR FET 2SK117 Y
1-TR2A	ET-348835	TR 2SC2690 Q,P
1-TR3A	ET-348834	TR 2SA1220 Q,P
1-TR4A,5A	ET-348830	TR 2SC2909 S,T
1-TR6A	ET-348829	⚠ TR 2SA1209 S,T
1-TR7A	ET-348831	⚠ TR 2SC2911 S,T
1-TR8A	ET-345625	⚠ TR 2SC3116 S,T
1-TR9A	ET-345626	⚠ TR 2SA1248 S,T
1-TR10A	ET-348830	TR 2SC2909 S,T
1-TR11A	ET-348832	TR 2SA1207 S,T
1-D1A,2A	ED-330219	D ZENER H HZ20L 2
1-D3Ato5A	ED-301911	D SILICON H DS448
1-D6A,7A	ED-337153	D SILICON H DS446FA5 F10
1-D8A	ED-348836	⚠ D SILICON RB602U 200/6.0A
1-D9A	ED-337153	D SILICON H DS446FA5 F10
1-D10A	ED-324194	D ZENER H 05Z5.1 X
1-D11A,12A	ED-323535	D ZENER H 05Z8.2 X
1-D13A,14A	ED-301911	D SILICON H DS448
1-VR6A	EV-361800	R S-FIX H SR19R 3P 0.15W 471
1-L1A	EO-332116	COIL FIX 2 103AK-006A 2.2UH
1-RL1A	EQ-348789	RELAY POW JC2AD 48V
1-FR1A,2A	ER-345618	⚠ R FUSE ERD2FC S10 1/4W 2700G
1-FR3A	ER-345619	⚠ R FUSE ERD2FC S10 1/4W 3301G
1-FR4A,5A	ER-319455	⚠ R FUSE ERD2FC S10 1/4W 10R0G
1-FR6A	ER-337756	⚠ R FUSE ERD2FC S10 1/4W 4700G
1-FR7A,8A	ER-345751	⚠ R FUSE ERD2FC S10 1/4W 15R0G
1-R13A,14A	ER-337773	⚠ R OMF H S15 FS 1W 222J
1-R22A	ER-328068	⚠ R CB H SNP FS RDS 1/4W 562J
1-R25A	ER-333429	⚠ R CB H S10 FS RDS 1/4W 682J
1-R48A	ER-345616	⚠ R CT W R33+R33 5W
1-R49A,50A	ER-337754	⚠ R OMF H S15 FS 1W 100J
1-R59A	ER-337755	⚠ R OMF H S20 FS 2W 222J
1-R60A	ER-324480	⚠ R CB H S10 FS RDS 1/4W 470J
1-C1A	EC-345656	C PP V F05 PP 473J 50DC
1-C4A	EC-345656	C PP V F05 PP 473J 50DC
1-C16A,17A	EC-345627	C EC V SNP 123M 56.0DC
	VOLUME P.C BOARD	
1-TR1B	ET-348844	TR 2SD467C C
1-SW4B	ES-345481	SW PUSH SEA12 04-2N
1-SW5Bto7B	ES-348841	SW PUSH SEA12 04-2S
1-VR2B	EV-337308	VR SLIDE 100P2SV0B B254
1-C1B	EC-344155	C PP V F05 PP 181J 50DC
1-C2B	EC-345655	C PP V F05 PP 223J 50DC
	SPEAKER SW P.C BOARD	
1-SW8C	ES-348845	SW PUSH SUL221S 2-THROW
	HEAD PHONE P.C BOARD	
1-J13D	EJ-348846	PHONE J 3P HLJ0540 6.3
1-FL1D	EO-342936	COIL BALUN (V)
1-R1D	ER-624756	⚠ R OMF H FS 2W 331J
	SWITCH P.C BOARD	
1-SW1E	ES-348847	SW REMOTE O SUR512 02-2
	LED (A) P.C BOARD	
1-D1F,2F	ED-337391	D LED GL5NG6 GRN
	LED (B) P.C BOARD	
1-D1G	ED-348861	D LED GL4PR2 RED
	LED (C) P.C BOARD	
1-D1Hto8H	ED-348860	D LED GL4NG2 GRN

2. TONE CONTROL P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1U	BA-A2021A060A	PC TONE BLK AM-U5 (U)
2-1C	BA-A2021A060B	PC TONE BLK AM-U5 (C) (C,A)
2-1E	BA-A2021A060C	PC TONE BLK AM-U5 (E)(E,B,S)
2-1V	BA-A2021A060D	PC TONE BLK AM-U5 (V)
	TONE CONTROL P.C BOARD	
2-IC1	EI-344764	IC M5218P-21
2-TR1,2	ET-337759	TR FET 2SK246 GR
2-TR3	ET-348787	⚠ TR FET 2SK213
2-TR4	ET-348788	⚠ TR FET 2SJ76
2-TR5	ET-345625	⚠ TR 2SC3116 S,T
2-TR6	ET-345626	⚠ TR 2SA1248 S,T
2-TR7	ET-310148	⚠ TR 2SD612K E,F
2-D1,2	ED-346564	D ZENER H HZ15L 1
2-D3	ED-346575	D ZENER H HZ22L 3
2-D4	ED-346576	D ZENER H HZ24L 1
2-D5	ED-346575	D ZENER H HZ22L 3
2-D6to8	ED-346576	D ZENER H HZ24L 1
2-D9,10	ED-301911	D SILICON H DS448
2-D11	ED-345615	D ZENER H 05Z12 Y
2-D12	ED-348786	⚠ D SILICON RB154 400/1.5A
2-D13	ED-345555	⚠ D SILICON DBB10C 200/1.0A
2-FR1,2	ER-319455	⚠ R FUSE ERD2FC S10 1/4W 10R0G
2-FR3,4	ER-318248	⚠ R FUSE ERD2FC S10 1/4W 47R0G
2-R22,23	ER-306127	⚠ R CB H S15 FS RDS 1/2W 681J
2-R24	ER-316802	R CB H S10 FS RDS 1/4W 471J
2-F3Cto5C	EF-310229	⚠ FUSE TSC 125V 1.00A (C,A)
2-F3Eto5E	EF-623103	⚠ FUSE SEMKO T 250V 1.00A (E,V,B,S)

3. EQUALIZER P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
3-1U	BA-A2021A040A	PC EQ BLK AM-U5 (U) (EXCEPT V)
3-1V	BA-A2021A040B	PC EQ BLK AM-U5 (V)
	EQUALIZER P.C BOARD	
3-IC1A	EI-348785	IC M5220L
3-IC2A	EI-348865	IC μPC4082C
3-TR1A	ET-345614	TR FET 2SK270 BL,V
3-D1A,2A	ED-301911	D SILICON H DS448
3-D3A,4A	ED-346564	D ZENER H HZ15L 1
3-J1A	EJ-337404	PIN J AJC-052-ABB P 6P
3-SW1A	ES-337388	SW REMOTE S SSR24352 04-3
3-SW2A	ES-345652	SW PUSH ESB-62907 5-THROW
3-VR1A	EV-338118	R S-FIX V H1052A 3P 0.15W 104
3-L1A	EO-337684	COIL FIX 2 FL12R751E 750UH (V)
3-L2A,3A	EO-336934	COIL FIX 1 LAL03KH 2.20UH M (V)
3-FR1A,2A	ER-338000	⚠ R FUSE ERD2FC S10 1/4W 2200G
3-R11A	ER-346864	R MF H F10 1/4W 75R0F
3-R12A	ER-345664	R MF H F10 1/4W 8R20F
3-R13A	ER-338325	R MF H 1/4W 4302F
3-R14A	ER-338078	R MF H F10 1/4W 3601F
3-R23A,24A	ER-327198	R CB H S10 FS RDS 1/4W 122J
3-C1A	EC-350745	C STY V CUT CQ09S2B 102J 125DC
3-C2A	EC-350675	C STY V CUT CQ09S2B 331J 125DC (EXCEPT V)
3-C3A	EC-344478	C PP V F05 PP 561J 50DC
3-C4A	EC-345607	C PP V F05 PP 152J 50DC
3-C5A	EC-345608	C PP V F05 PP 7442G 50DC
3-C6A	EC-345609	C PP V F05 PP 2102G 50DC
3-C7A	EC-345655	C PP V F05 PP 223J 50DC
3-C9Ato12A	EC-345655	C PP V F05 PP 223J 50DC
3-C14A	EC-350675	C STY V CUT CQ09S2B 331J 125DC (V)
	INPUT P.C BOARD	
3-J2B,3B	EJ-336915	PIN J AJC-054-ABB P 4P
3-L1Bto4B	EO-336934	COIL FIX 1 LAL03KH 2.20UH M (V)

4. POWER SUPPLY U5-1 P.C BOARD BLOCK (U, C, A)

REF. NO.	PARTS NO.	DESCRIPTION
4-SW1U	ES-343688	⚠ SW PUSH ESB-90279S 01-1EBV (U)
4-SW1C	ES-348862	⚠ SW PUSH ESB-70405T 01-1 UC (C,A)
4-C1U	EC-320548	⚠ C CE V F 103Z 250AC (U)
4-C1C	EC-314688	⚠ C CE V FZ 103P 125AC (C,A)
4-F1U,2U	EF-691007	⚠ FUSE SEMKO T 250V 3.15A (U)
4-F1C	EF-346115	⚠ FUSE TSC 125V 6.30A (C,A)

5. POWER SUPPLY U5-2 P.C BOARD BLOCK (E, V, B, S)

REF. NO.	PARTS NO.	DESCRIPTION
5-SW1	ES-343688	⚠ SW PUSH ESB-90279S 01-1EBV
5-C1	EC-338411	⚠ C CE V FZ 103P 400AC
5-F1	EF-691007	⚠ FUSE SEMKO T 250V 3.15A

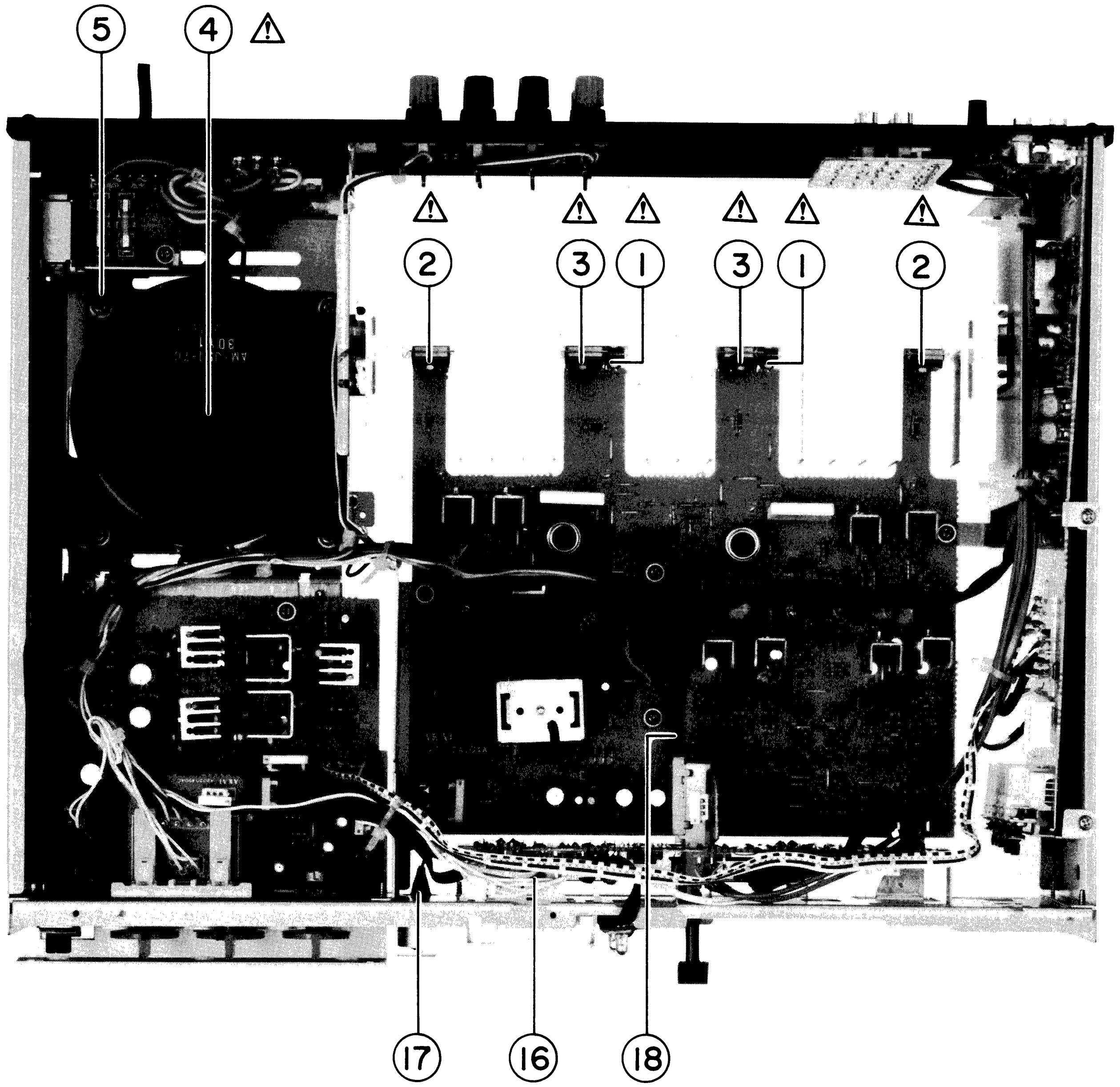
6. TERMINAL P.C BOARD BLOCK (V ONLY)

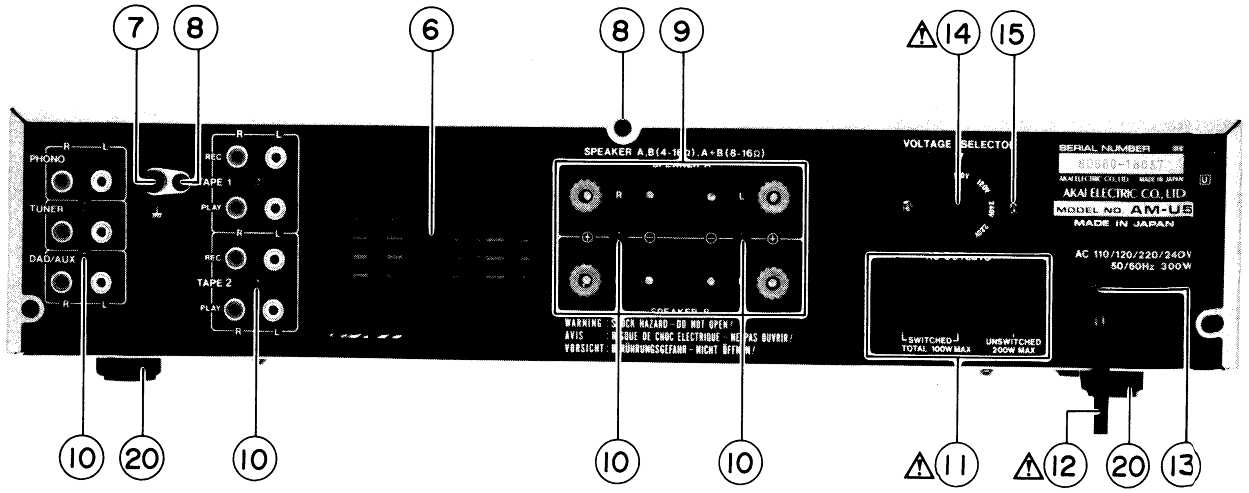
REF. NO.	PARTS NO.	DESCRIPTION
6-J1	EJ-342935	TERMINAL W/SCREW YKD31-0132 P 8P
6-FL1	EO-342936	COIL BALUN
6-C1,2	EC-324623	C CE V F05 B 103K 50DC

7. ASSEMBLY BLOCK

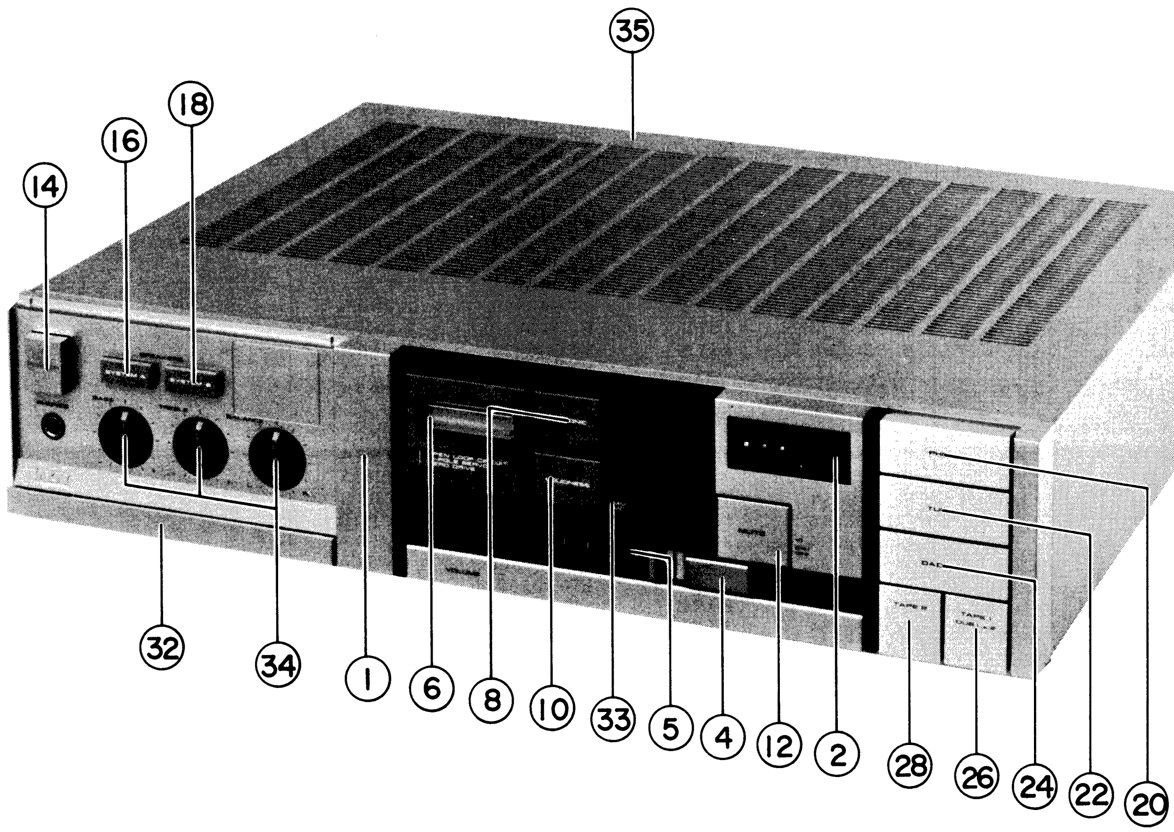
REF. NO.	PARTS NO.	DESCRIPTION
		HEAT SINK BLOCK
7-1	ET-345625	⚠ TR 2SC3116 S,T (TR901)
7-2	ET-345628	⚠ TR 2SC2580 O,Y (TR902)
7-3	ET-345629	⚠ TR 2SA1105 O,Y (TR903)
		ASSEMBLY BLOCK
7-4U	BT-345620	⚠ TRANS POWER AM-U5T-70 (U) (T901)
7-4C	BT-345621	⚠ TRANS POWER AM-U5T-30 (C,A) (T901)
7-4E	BT-345622	⚠ TRANS POWER AM-U5T-40 (E,V) (T901)
7-4B	BT-345623	⚠ TRANS POWER AM-U5T-50 (B,S) (T901)
7-5	ZS-345624	ST PAN40×08STL CMT CUP
7-6U	SP-345583A	PANEL REAR AM-U5 (U)
7-6C	SP-345583B	PANEL REAR AM-U5 (C,A)
7-6E	SP-345583C	PANEL REAR AM-U5 (E,V)
7-6B	SP-345583D	PANEL REAR AM-U5 (B,S)
7-7	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P (TM901)
7-8	ZS-308846	T2BR30×08STL BZN PROJECTION
7-9	EJ-337406	TERMINAL W/SCREW ANB-024-AAA S 8P (TM902) (EXCEPT V)
7-10	ZS-522865	T2BR30×12STL BNI
7-11	EJ-337405	⚠ SOCKET OUTLET S2T733T164 JUC 3×2P (U,C,A)
7-12U	EW-374894	⚠ AC CORD 2 CORES VM-0129A, VFF U/T (U)
7-12C	EW-343363	⚠ AC CORD 2 CORES KP-8, SPT-2 105C UC (C)
7-12A	EW-305691	⚠ AC CORD 2 CORES KP-8, SPT-1 UC (A)
7-12E	EW-346251	⚠ AC CORD 2 CORES VM0364, NR N/815 EV (E,V)
7-12B	EW-346249	⚠ AC CORD 2 CORES LCFL2×0.75 B (B)
7-12S	EW-336924	⚠ AC CORD 2 CORES KP-560, LTSA-2F S (S)
7-13	EZ-631945	STRAIN RELIEF SR-4N-4
7-14	ES-343364	⚠ SW SELECTOR 0240#01 01-4 (SW901) (U)
7-15	ZS-309315	T2BR30×10STL BNI (U)
7-16	EL-348852	PL CODE 14.0V 100MA 100/100 (IN901)
7-17	EL-348854	PL CODE 12.0V 220MA 250/250 (IN902)
7-18	ES-348858	SW REMOTE B SWR1306 L=287
7-19x	ZW-305013	RV POP32 (A)
7-20	SA-312465	CIRCULAR FOOT (A) PART CA

ASSEMBLY BLOCK


⑤
④ ⚠
⚠ ⚠ ⚠ ⚠ ⚠ ⚠
②
③ ①
③ ①
②
⑰
⑯
⑱


⑦ ⑧
⑥
⑧ ⑨
⚠⑭ ⑮
PHONO
TUNER
DAD/AUX
REC
TAPE 1
PLAY
TAPE 2
SPEAKER A.B(4-16Ω) A+B(8-16Ω)
VOLTAGE SELECTOR
SERIAL NUMBER
AKAI ELECTRIC CO., LTD
MODEL NO. AM-U5
MADE IN JAPAN
AC 110/120/220/240V 50/60Hz 300W
SWITCHED TOTAL 100W MAX
UNSWITCHED 200W MAX
⑩ ⑳
⑩
⑩
⑩
⚠⑪
⚠⑫ ⑳ ⑬

FINAL ASSEMBLY BLOCK



8. FINAL ASSEMBLY BLOCK

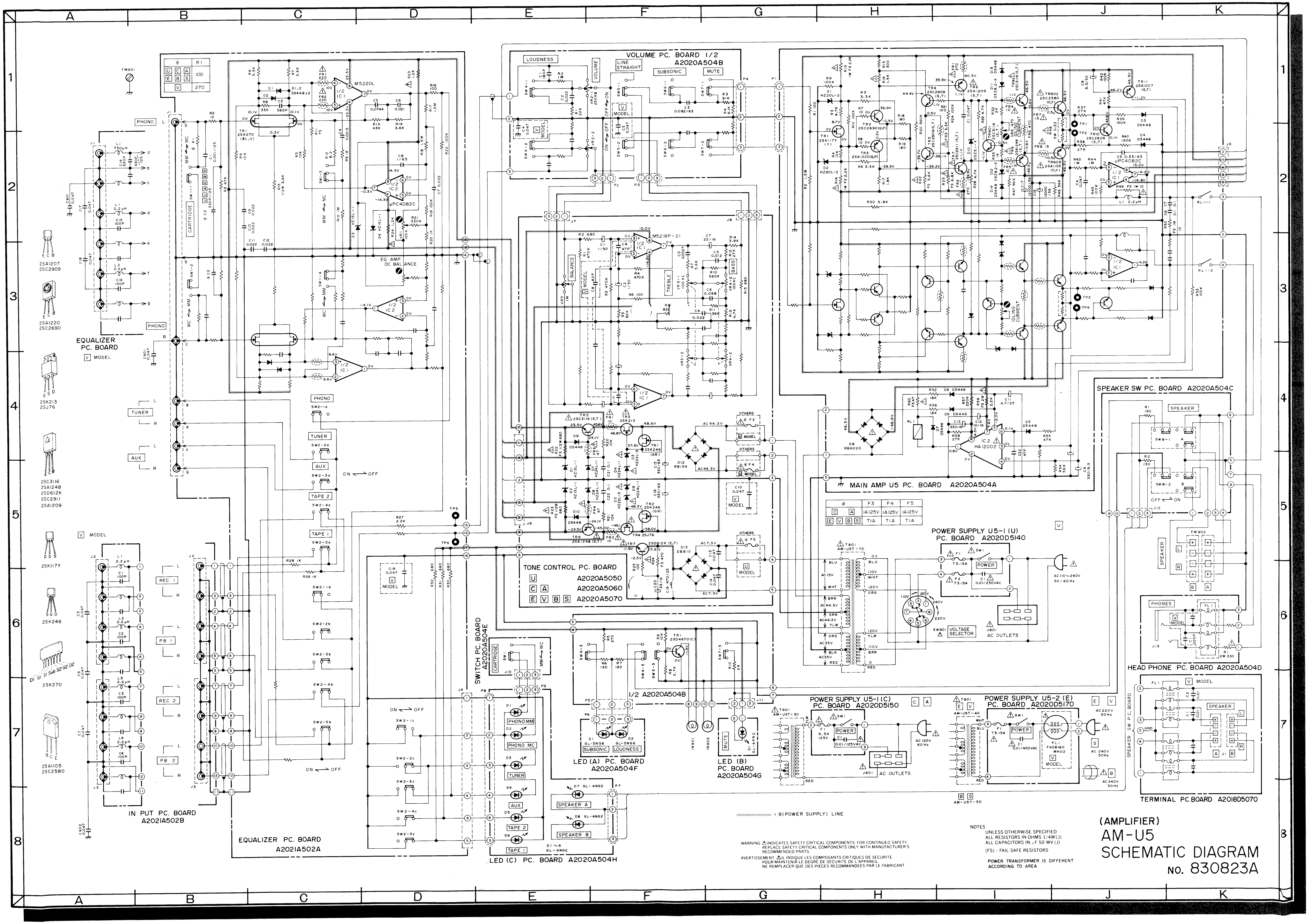
REF. NO.	PARTS NO.	DESCRIPTION
8-1	BD-A2021A080A	PANEL FRONT BLK AM-U5
8-1P	BD-A2021A080B	PANEL FRONT BLK AM-U5-P
	PANEL FRONT BLOCK	
8-2	SP-348759	WINDOW DISPLAY (A)
8-3x	SZ-348765	HOLDER VOLUME
8-4	SK-348762A	KNOB VOLUME
8-4P	SK-348762B	KNOB VOLUME-P
8-5	SP-348741A	WINDOW VOLUME AM-U5
8-6	SK-B348754	KNOB PUSH LINE STRAIGHT PART
8-7x	ZG-323317	SP (C)
8-8	SK-B348752A	KNOB PUSH SUBSONIC PART
8-8P	SK-B348752B	KNOB PUSH SUBSONIC-P PART
8-9x	ZG-322579	SP (A)
8-10	SK-B348752C	KNOB PUSH LOUDNESS PART
8-10P	SK-B348752D	KNOB PUSH LOUDNESS-P PART
8-11x	ZG-322579	SP (A)
8-12	SK-348750C	KNOB PUSH MUTE
8-12P	SK-348750D	KNOB PUSH MUTE-P
8-13x	ZG-322579	SP (A)
8-14	SK-342820A	KNOB POWER
8-14P	SK-342820B	KNOB POWER-P
8-15x	ZG-322579	SP (A)
8-16	SK-348757A	KNOB PUSH SYSTEM (A)
8-16P	SK-348757B	KNOB PUSH SYSTEM (A)-P
8-17	ZG-348769	SP PUSH
8-18	SK-348757C	KNOB PUSH SYSTEM (B)
8-18P	SK-348757D	KNOB PUSH SYSTEM (B)-P
8-19x	ZG-348769	SP PUSH
8-20	SK-B348747A	KNOB CAP PHONO PART
8-20P	SK-B348747B	KNOB CAP PHONO-P PART
8-21x	ZG-323317	SP (C)
8-22	SK-B348748A	KNOB CAP TUNER PART
8-22P	SK-B348748B	KNOB CAP TUNER-P PART
8-23x	ZG-349041	SP PUSH (B)
8-24	SK-B348748C	KNOB CAP AUX PART
8-24P	SK-B348748D	KNOB CAP AUX-P PART
8-25x	ZG-349041	SP PUSH (B)
8-26	SK-B348749E	KNOB CAP TAPE1 DUB1-2 PART
8-26P	SK-B348749F	KNOB CAP TAPE1 DUB1-2-P PART
8-27x	ZG-322579	SP (A)
8-28	SK-B348749C	KNOB CAP TAPE2 PART
8-28P	SK-B348749D	KNOB CAP TAPE2-P PART
8-29x	ZG-322579	SP (A)
	PANEL DOOR BLOCK	
8-30x	ZG-345575A	SP PLATE (L)
8-31x	ZG-345575B	SP PLATE (R)
8-32	SP-345587A	PANEL DOOR AM-U5
8-32P	SP-345587B	PANEL DOOR AM-U5-P
	FINAL ASSEMBLY BLOCK	
8-33	SK-348751	KNOB PUSH MM/MC
8-34	SK-348756C	KNOB ROTARY AM-U5
8-34P	SK-348756B	KNOB ROTARY-P
8-35	SP-345589A	COVER UPPER
8-35P	SP-345589B	COVER UPPER-P

SYMBOL FOR COLOR VARIATION

NONE – SILVER
P – PEARL SHADOW

INDEX

PARTS NO.	REF. NO.
BA-A2021A040A	3-1U
BA-A2021A040B	3-1V
BA-A2021A050A	1-1U
BA-A2021A050B	1-1V
BA-A2021A060A	2-1U
BA-A2021A060B	2-1C
BA-A2021A060C	2-1E
BA-A2021A060D	2-1V
BD-A2021A080A	8-1
BD-A2021A080B	8-1P
BT-345620	7-4U
BT-345621	7-4C
BT-345622	7-4E
BT-345623	7-4B
EC-314688	4-C1C
EC-320548	4-C1U
EC-324623	6-C1
EC-324623	6-C2
EC-338411	5-C1
EC-344155	1-C1B
EC-344478	3-C3A
EC-345607	3-C4A
EC-345608	3-C5A
EC-345609	3-C6A
EC-345627	1-C16A
EC-345627	1-C17A
EC-345655	1-C2B
EC-345655	3-C7A
EC-345655	3-C10A
EC-345655	3-C12A
EC-345655	3-C11A
EC-345655	3-C9A
EC-345656	1-C1A
EC-345656	1-C4A
EC-350675	3-C2A
EC-350675	3-C14A
EC-350745	3-C1A
ED-301911	1-D3A
ED-301911	1-D4A
ED-301911	1-D5A
ED-301911	1-D13A
ED-301911	1-D14A
ED-301911	2-D9
ED-301911	2-D10
ED-301911	3-D2A
ED-301911	3-D1A
ED-323535	1-D11A
ED-323535	1-D12A
ED-324194	1-D10A
ED-330219	1-D1A
ED-330219	1-D2A
ED-337153	1-D9A
ED-337153	1-D6A
ED-337153	1-D7A
ED-337391	1-D1F
ED-337391	1-D2F
ED-345555	2-D13
ED-345615	2-D11
ED-346564	2-D1
ED-346564	2-D2
ED-346564	3-D3A
ED-346564	3-D4A
ED-346575	2-D3
ED-346575	2-D5
ED-346576	2-D4
ED-346576	2-D7
ED-346576	2-D8
ED-346576	2-D6
ED-348786	2-D12
ED-348836	1-D8A
ED-348860	1-D1H
ED-348860	1-D2H
ED-348860	1-D3H
ED-348860	1-D4H
ED-348860	1-D5H
ED-348860	1-D7H
ED-348860	1-D8H
ED-348860	1-D6H
ED-348861	1-D1G
EF-310229	2-F3C
EF-310229	2-F5C
EF-310229	2-F4C
EF-346115	4-F1C
EF-623103	2-F4E
EF-623103	2-F5E
EF-623103	2-F3E
EF-691007	4-F2U
EF-691007	4-F1U
EF-691007	5-F1
EI-337360	1-IC1A
EI-344764	2-IC1
EI-345474	1-IC2A
EI-348785	3-IC1A
EI-348865	3-IC2A
EJ-329610	7-7
EJ-336915	3-J3B
EJ-336915	3-J2B
EJ-337404	3-J1A
EJ-337405	7-11
EJ-337406	7-9
EJ-342935	6-J1
EJ-348846	1-J13D
EL-348852	7-16
EL-348854	7-17
EO-332116	1-L1A
EO-336934	3-L4B
EO-336934	3-L3A
EO-336934	3-L2A
EO-336934	3-L2B
EO-336934	3-L3B
EO-336934	3-L1B
EO-337684	3-L1A
EO-342936	1-FL1D
EO-342936	6-FL1
EQ-348789	1-RL1A
ER-306127	2-R22
ER-306127	2-R23
ER-316802	2-R24
ER-318248	2-FR3
ER-318248	2-FR4
ER-319455	1-FR4A
ER-319455	1-FR5A
ER-319455	2-FR2
ER-319455	2-FR1
ER-324480	1-R60A
ER-327198	3-R23A
ER-327198	3-R24A
ER-328068	1-R22A
ER-333429	1-R25A
ER-337754	1-R50A
ER-337754	1-R49A
ER-337755	1-R59A
ER-337756	1-FR6A
ER-337773	1-R13A
ER-337773	1-R14A
ER-338000	3-FR2A
ER-338000	3-FR1A
ER-338078	3-R14A
ER-338325	3-R13A
ER-345616	1-R48A
ER-345618	1-FR1A
ER-345618	1-FR2A
ER-345619	1-FR3A
ER-345664	3-R12A
ER-345751	1-FR8A
ER-345751	1-FR7A
ER-346864	3-R11A
ER-624756	1-R1D
ES-337388	3-SW1A
ES-343364	7-14
ES-343688	4-SW1U
ES-343688	5-SW1
ES-345481	1-SW4B
ES-345652	3-SW2A
ES-348841	1-SW6B
ES-348841	1-SW7B
ES-348841	1-SW5B
ES-348845	1-SW8C
ES-348847	1-SW1E
ES-348858	7-18
ES-348862	4-SW1C
ET-310148	2-TR7
ET-322353	1-TR1A
ET-337759	2-TR2
ET-337759	2-TR1
ET-345614	3-TR1A
ET-345625	1-TR8A
ET-345625	2-TR5
ET-345625	7-1
ET-345626	1-TR9A
ET-345626	2-TR6
ET-345628	7-2
ET-345629	7-3
ET-348787	2-TR3
ET-348788	2-TR4
ET-348829	1-TR6A
ET-348830	1-TR10A
ET-348830	1-TR4A
ET-348830	1-TR5A
ET-348831	1-TR7A
ET-348832	1-TR11A
ET-348834	1-TR3A
ET-348835	1-TR2A
ET-348844	1-TR1B
EV-337308	1-VR2B
EV-338118	3-VR1A
EV-361800	1-VR6A
EW-305691	7-12A
EW-336924	7-12S
EW-343363	7-12C
EW-346249	7-12B
EW-346251	7-12E
EW-374894	7-12U
EZ-631945	7-13
SA-312465	7-20
SK-B348747A	8-20
SK-B348747B	8-20P
SK-B348748A	8-22
SK-B348748B	8-22P
SK-B348748C	8-24
SK-B348748D	8-24P
SK-B348749C	8-28
SK-B348749D	8-28P
SK-B348749E	8-26
SK-B348749F	8-26P
SK-B348752A	8-8
SK-B348752B	8-8P
SK-B348752C	8-10
SK-B348752D	8-10P
SK-B348754	8-6
SK 342820A	8-14
SK-342820B	8-14P
SK-348750C	8-12
SK-348750D	8-12P
SK-348751	8-33
SK-348756B	8-34P
SK-348756C	8-34
SK-348757A	8-16
SK-348757B	8-16P
SK-348757C	8-18
SK-348757D	8-18P
SK-348762A	8-4
SK-348762B	8-4P
SP-345583A	7-6U
SP-345583B	7-6C
SP-345583C	7-6E
SP-345583D	7-6B
SP-345587A	8-32
SP-345587B	8-32P
SP-345589A	8-35
SP-345589B	8-35P
SP-348741A	8-5
SP-348759	8-2
SZ-348765	8-3x
ZG-322579	8-9x
ZG-322579	8-15x
ZG-322579	8-29x
ZG-322579	8-27x
ZG-322579	8-11x
ZG-322579	8-13x
ZG-323317	8-7x
ZG-323317	8-21x
ZG-345575A	8-30x
ZG-345575B	8-31x
ZG-348769	8-19x
ZG-348769	8-17
ZG-349041	8-25x
ZG-349041	8-23x
ZG-308846	7-8
ZS-309315	7-15
ZS-345624	7-5
ZS-522865	7-10
ZW-305013	7-19x


EQUALIZER PC. BOARD
V MODEL
IN PUT PC. BOARD A2021A502B
EQUALIZER PC. BOARD A2021A502A
VOLUME PC. BOARD 1/2 A2020A504B
TONE CONTROL PC. BOARD
U A2020A5050
C A A2020A5060
E V B S A2020A5070
SWITCH PC. BOARD A2020A504E
LED (C) PC. BOARD A2020A504H
LED (A) PC. BOARD A2020A504F
1/2 A2020A504B
LED (B) PC. BOARD A2020A504G
MAIN AMP U5 PC. BOARD A2020A504A
SPEAKER SW PC. BOARD A2020A504C
POWER SUPPLY U5-1 (U) PC. BOARD A2020D5140
POWER SUPPLY U5-1 (C) PC. BOARD A2020D5150
POWER SUPPLY U5-2 (E) PC. BOARD A2020D5170
HEAD PHONE PC. BOARD A2020A504D
TERMINAL PC.BOARD A2018D5070
PHONO
TUNER
AUX
TAPE 1
TAPE 2
REC 1
PB 1
REC 2
PB 2
CARTRIDGE
LOUDNESS
LINE STRAIGHT
SUBSONIC
MUTE
BALANCE
TREBLE
BASS
EQ AMP DC BALANCE
IDLING CURRENT
SPEAKER A
SPEAKER B
PHONES
VOLTAGE SELECTOR
AC OUTLETS
T901 AM-U5T-70
T901 AM-U5T-30
T901 AM-U5T-40
AM-U5T-50
AC110~240V 50/60Hz
AC120V 60Hz
AC220V 50Hz
AC240V 50Hz
2SA1207 2SC2909
2SA1220 2SC2690
2SK213 2SJ76
2SC3116 2SA1248 2SD612K 2SC2911 2SA1209
2SK117Y
2SK246
2SK270
2SA1105 2SC2580
A B C D E F G H I J K
1 2 3 4 5 6 7 8

※	F3	F4	F5
C A	1A125V	1A125V	1A125V
E V B S	T1A	T1A	T1A

= B(POWER SUPPLY) LINE

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

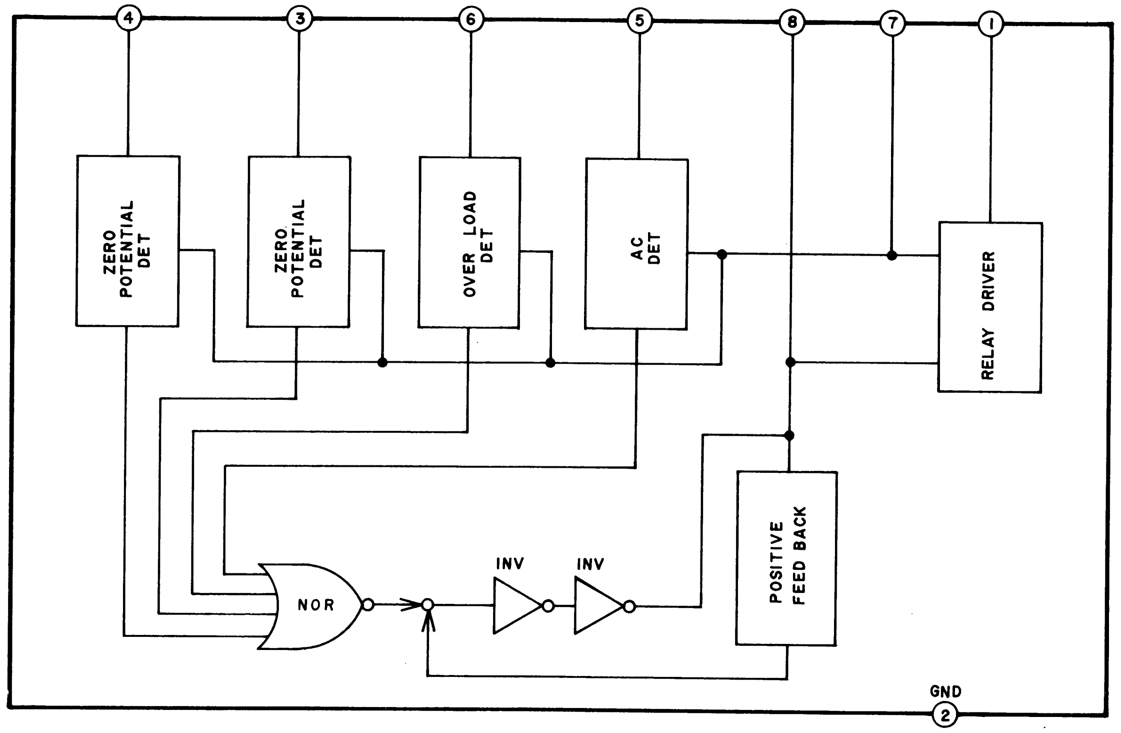
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTES
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV (J)
(FS) = FAIL SAFE RESISTORS

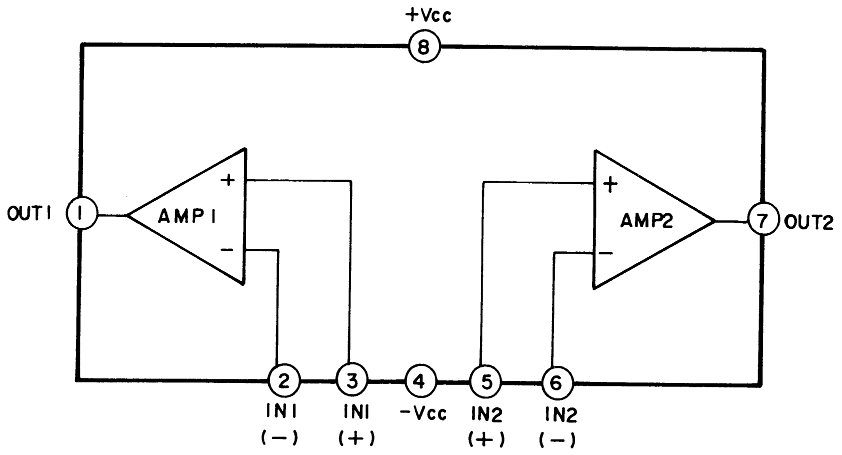
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

(AMPLIFIER)
AM-U5
SCHEMATIC DIAGRAM
NO. 830823A

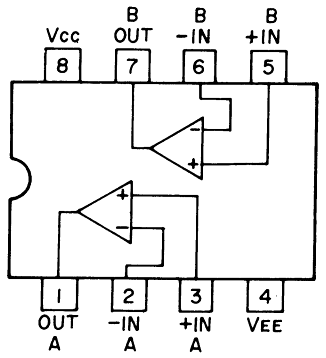
HA12002


4
3
6
5
8
7
1
ZERO POTENTIAL DET
ZERO POTENTIAL DET
OVER LOAD DET
AC DET
RELAY DRIVER
POSITIVE FEED BACK
NOR
INV
INV
GND
2

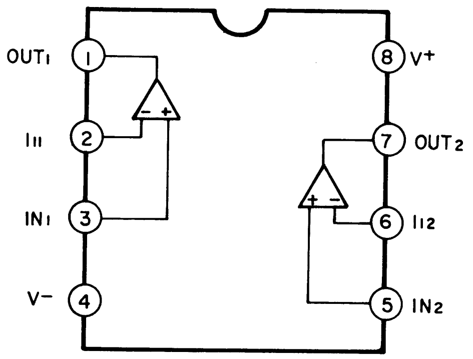
M5220L


+Vcc
8
OUT1
1
AMP1
+
−
AMP2
+
−
7
OUT2
2
IN1
(−)
3
IN1
(+)
4
−Vcc
5
IN2
(+)
6
IN2
(−)

M5218P-21


Vcc
8
B
OUT
7
B
−IN
6
B
+IN
5
1
OUT
A
2
−IN
A
3
+IN
A
4
VEE

μPC4082C


OUT1
1
I11
2
IN1
3
V−
4
8
V+
7
OUT2
6
I12
5
IN2

SECTION 3

SCHEMATIC DIAGRAM

TABLE OF CONTENTS

1. SCHEMATIC DIAGRAM 26
2. SCHEMATIC DIAGRAM OF ICs 27